TEACHERS COLLEGE RECORD

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THE CURRICULUM OF THE HORACE MANN ELEMENTARY SCHOOL

INTRODUCTORY STATEMENT

This number of the TEACHERS COLLEGE RECORD is the second of a series that describes the work of the various grades of the Horace Mann Elementary School as it is now carried on. The first number of this series on the work of the first grade appeared in January 1906[1]; the third number, describing the work of the fourth and fifth grades, and the fourth number, describing that of the sixth and seventh grades, will appear in 1907.

In the first number of this series the point of view of the Horace Mann School on certain phases of elementary education was briefly stated in an article entitled "Controlling Ideas of the Horace Mann Elementary School," where were considered such topics as The Meaning and Aim of Education, Moral Education, Interest, Nature of the Recitation, Correlation, Nature of the Child, School Life. This article is, therefore, an introduction to this series, but is not reprinted in this number.

This number has been prepared by the teachers of the second and third grades with the assistance of an advisory committee.

Second-Grade Teachers:
Evelyn Batchelder,
Katherine Welles.

Third-Grade Teachers:
Mildred I. Batchelder,
Mary H. Lewis.

[1] Reprinted as a separate pamphlet, price fifty cents.

Special Teachers:

Lucy H. Weiser, *Manual Training.*
Mary C. Upham, *Art.*
Helen Newpher, *Gymnasium.*
Helen Latham, *Music.*

Advisory Committee:

Henry C. Pearson, A.B., Principal.
Frank M. McMurry, Ph.D., Teachers College.
Mary F. Kirchwey, Sixth Grade.

SECOND GRADE

PRIMITIVE LIFE

Certain phases of early social culture are studied in the second grade not for the sake of information about a remote and primitive period, but as a means for gaining a better understanding of the life of to-day. The underlying thought in the work of the year is to develop a community attitude which shall allow a natural and unified approach to many of the subjects that are commonly dealt with as separate studies.

The following topics are discussed and the problems raised in connection with work in manual training, art, nature study, music, English, and arithmetic. This relationship is most clearly shown in the work in manual training, art, and nature study. In manual training the children work out some of the material problems that primitive peoples faced, in art the decorative side becomes prominent, while in nature study the economic value of certain vegetables, flowers, and animals is developed.

In the second grade the work of social evolution closely follows that of the preceding year. The children in the first grade have gained a knowledge of community life in the hunting and fishing stages that has brought them in touch with primitive methods of securing food, shelter, and clothing. They have discovered that it was necessary for the people of this period not only to overcome the wild beasts, but also to contend with other warlike tribes for the protection of their homes and families. Conversation and stories have shown that gradually, as these tribes increased in numbers, the difficulty of obtaining a sufficient food supply was encountered and new means of securing it had to be devised. At the beginning of the second year these facts, briefly recalled, reëstablish the vivid pictures of this primitive life and form the basis necessary for the transition to the new phases of culture about to be studied. These represent the pastoral and agricultural stages, with constant comparison between this primitive existence and our modern life. Use is made, at all points, of the child's previous experiences both at home and at school.

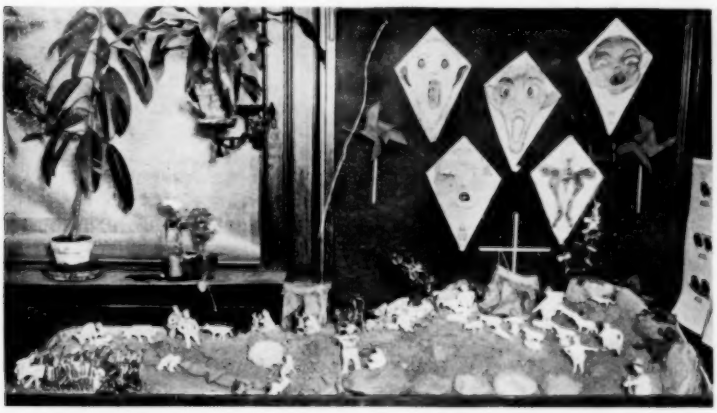
For sake of dramatic illustration reference is made to (1) the Bible characters, David and Abraham, (2) the Swiss shepherd, (3) the shepherds of the northwest. These show in the simplest manner the successive situations of the shepherd, the nature of his equipment, and offer opportunities for studying the different problems he met in the struggle for an existence.

The former study of life during the hunting and fishing stages—especially the consideration of the uncertainty of obtaining food by these means—helps the children to appreciate the difficulties man found in supplying his natural needs, and enables them to understand how the thought arose of domesticating certain animals and thus guarding against the danger of want and starvation. This leads them to appreciate the advance to the pastoral stage and to discuss the different ways in which wild animals may be tamed and domesticated. They are also led to notice which animals can most nearly provide for themselves and give least trouble to their owners, which will be the most valuable for food, how they can be kept together and prevented from straying away, to what dangers they will be exposed, and what will have to be done when the food supply gives out.

As the children discuss the nature of pastoral life, they begin to see that here are many new conditions for man to meet which must necessarily change his manner of living. Such questions as the following help the children to realize what some of the conditions are: "Will these men be likely to choose a warm or a cold country? a moist or a dry one? Will they need for their flocks forests or open land? How long will they be likely to remain in one place? What kind of a house will it be wise for them to build, one like ours, or one like the nomadic hunter? How will they care for the sheep in stormy weather?" Such questions develop the necessity for migration when the pasturage is exhausted and the consequent need of shelters that can readily be moved from place to place. They also suggest that all household equipment must be very limited and bring up the question of just how such things would be transported.

After a thorough discussion of these points and many others with pictures and stories to help complete the outline, the children set to work to represent the life of this period and to work out some of the problems such a people must face. At

first sketches are made on paper and on the blackboard showing a herder's encampment. These are criticised by the class and the one chosen that best represents the idea. With this as a guide the work of developing a representation on the sand-



Representation of pastoral life on the sand table.

table begins. Earth is used as a medium, and various children are delegated by the class to bring stones for walls and defenses, and small pebbles for wells and the banks of a river or a brook. Others are asked to bring twigs to make a corral, while several are busy making tents for the shepherds, and shelters for the flocks. Bridges are made of twigs bound together, and stepping stones are used, or "a large tree felled and hurled across the water." The results of such a study show clay sheep feeding on grassy plain and hillside, drinking from the brook or well, and gathered in the corral, carefully guarded by clay shepherds dressed in burlap with rush hats and carrying shepherds' crooks made of bent willow twigs, while two or three shepherd dogs watch on the outskirts of the encampment. Shepherds on stilts are seen in the boggy marshes in pursuit of stray lambs. Horses with saddle-bags are ready for a journey. Rugs of woven mats are used on the floors of tents that are grouped about the fires.

The changed conditions of this form of life as compared with that of the hunting tribe make it evident to the children that a different kind of leader is needed. Physical strength

and skill are no longer the first essentials. They see that the leader must now be a man of much wisdom in order to settle disputes as to the duties of the different members, to adjust the disposition of the common property, and to direct the movements of the tribe. Such a leader they feel will likely be the one of most experience,—the elder or patriarch. He will guide the others by his counsel and to him they give obedience and reverence in return, "Just as it is at home" suggests one small person. They come to see that the living and working together of many people in this way need some rules or regulations so that the rights of each may be preserved, and that these rules are very much like our laws. They feel that now the tribe is having a peaceful and comfortable existence.

The pastoral stage in the social evolution of man has often been called the "play period of the race." This kind of life often involved vaulting, jumping, running after stray sheep, and stilt-walking. These activities have been perpetuated in many of our old games, such possibly as "Hare and Hounds," or "Run, Sheep, Run." The children often enter into the spirit of this life by working out for themselves original games or songs, or even by making stilts for their own use. Some impersonate the shepherds in their various activities, such as throwing the sling or playing in imagination on an improvised reed-pipe or shepherd's bag-pipe; others vault the aisles (imagined as boggy places), and rescue lambs from pits with the crook; still others impersonate the lambs and the shepherd dogs, with a group in a corner of the room representing the mother and small children weaving and cooking. The *Song of the Wool* and *The Shearers*—songs appropriate to this life,—also some old dances referring to weaving, have been thoroughly enjoyed by the children.

The children remember that the Indian women made simple gardens and cared for them, and that it was the same with the pastoral people. They are led to see, however, that the restlessness and irregular life of both the Indian and the shepherd has interfered with any serious attempt at agriculture. By conversation and questions it is shown that as the people prosper they have a greater desire to give up the migratory life and become more settled in order to care for their numerous flocks and to cultivate crops, that this work is gradually assumed by

the men, who begin to think of owning permanent homes and of increasing their wealth. The children readily see that this form of living possesses many advantages of comfort and increased powers, but through their own planting experiences they come also to see that it demands much greater patience and foresight.

This leads to a more careful study of the farm life with which these children are acquainted. They tell about the farms they have visited in the summer, the work of the farmer and his family, the location of the farm, what animals were seen, what vegetables were raised, and the necessity of a water supply for gardens and stock. Then they discuss what the man would do who is just beginning to plant, who has no farm tools like those of to-day, and who knows very few vegetables "Where will such a man place his farm? What kind of plants will he cultivate? How will he find out what plants are good for food and what are not? How can he bring water to his crop in case of drought?" Such questions serve to start the discussion and to develop thought as to the new problems.

The garden work of the imaginary farmer keeps in touch with the school garden. The children plant vegetables and grains, prepare the ground, weed and water it, and in the fall harvest the crops. They add to their knowledge of the Indian maize by reading *Hiawatha*, and find that it is one of the most important of the cultivated food plants. They are shown different varieties in the husks. Many have seen it growing and some have planted it in the school gardens or at their summer homes. The husking, cutting, and harvesting, with its uses as a food for animal and man, follow.

The problem of preparing some of the dried corn for cooking is studied. Some pound it and some grind it between stones. After these experiments, an Indian mealing-stone is shown to them and some of this corn is ground in it. The class then cooks corn cakes made of water, salt, and meal. Corn-meal mush is cooked and eaten also. As milk is one of the important products of this pastoral life, the children discuss its uses. Although most of these children have seen cows during the summer, few have had a chance to know much about their habits or their usefulness to man. Their shelter, food, craving for salt, their teeth as adapted to their function and manner of chewing the

cud are discussed. The various products of milk are then sudied. The rising of the cream is observed. This is skimmed off and the process of churning is then undertaken. Each child is given an individual pint cream jar one third full of cream. (They have previously made wooden covers and dashers to fit the jars in the manual training.) At the end of fifteen minutes of energetic churning, butter usually appears. It is then taken out, washed, salted, and eaten on crackers. The buttermilk is tasted, and its possible use to the farmer questioned. The old method of hand churning is compared with the up-to-date methods, the child readily realizing the great improvement made, as well as the saving of labor and time for man. vessels are made of clay for holding milk and for cooking grain, and lamps for oil, and candlesticks are built up out of this material and fired in the kiln.

A representation of a primitive farm is then worked out on the sand-table. The position of the cultivated fields is determined with reference to river and hill-side, and oats and corn are planted. Then the problem of a solid and strong house that could be kept comfortable in winter by a fire is studied. It is decided that such a house may be built of either logs or dried mud bricks, according to the surroundings. One of dried bricks is decided on and the bricks are made by hand and the walls built up. The question of covering the roof leads to various attempts to use bark, branches, and straw. Fences are made of stones and small twigs. Rakes, a simple wagon, a primitive plow and hoe are among the implements constructed. Toy animals, or those made of clay and painted, add to the realism of the scene.

Imaginative sketches of the farmer at work making hay, sowing seed "after Millet," and harvesting are made, the children often taking the pose. Market baskets and farmer's hats are also made of willow or ash splints and rushes.

The children can be brought to see how the new fact of living permanently on one piece of land leads to the idea of private ownership of the land. They readily understand how important it was for these people to protect themselves, their crops, and houses from warlike neighbors, and how forts and stockades came to be needed when a great many farmers lived close together. They see that under these conditions a permanent

force of soldiers is desirable and that these will have to be supported by the farmer's giving up some of his crops as a tax. They see, too, that these conditions bring up many more difficult questions concerning laws and that the problem of governing is a much more difficult one.

All this work has helped the child to interpret the material side of his environment. He has been constantly adding to his experiences, and through the constant oppoirtunties for initiative offered by the constructive work, by the illustrating and dramatizing of these processes of evolution, he has gained in judgment and in a realizing sense of his own power of production and creation.

E. B.

MANUAL TRAINING

The manual training in the second grade is a continuation and further development of that begun in the first. The aims, general character, and methods of presenting the subject are substantially the same. The work centers about the main lines of thought during the year, in connection with the study of social occupations as they are found among the pastoral and early agricultural peoples. As these types represent very simple conditions, the activities are still largely those involved in the securing of food, clothing, and shelter. The study of the first grade forms a basis for comparison, and aids in the solution of similar problems under new conditions.

In the pastoral stage the domestication of animals, especially sheep, determined very largely the life and occupations of the people, and greatly enriched their sources of supply, particularly that of clothing. The child brings with him into the second grade a vivid picture of the dress of the primitive hunter. He has learned that he used woven grasses, leaves, and skins for clothing. He remembers that the skin garments were very hard to prepare, and that the cloth of woven grass and rushes was not strong nor soft, nor close and fine like his own clothing.

The children are now given pieces of silk, cotton, and woolen materials, and some raw wool from a fleece. By the sense of touch and examination of the ravelled threads they decide upon the woolen cloth as being of the same material as the fleece. They are asked to find out which articles of their clothing are made of wool, at what season we wear wool, and to name other things made of wool. Having traced the woolen materials back to the wool, they are ready for the study of the sheep. They are then taken to Central Park, where they see the sheep in flocks. They notice the shape of the body, head, legs, and tail; his manner of moving and feeding, and his way of giving alarm. Memory sketches are made on the return to the classroom. In the lesson following a fleece is shown, and by examination the children notice where the wool is thickest and softest, where finest and where coarsest. Different methods of shearing

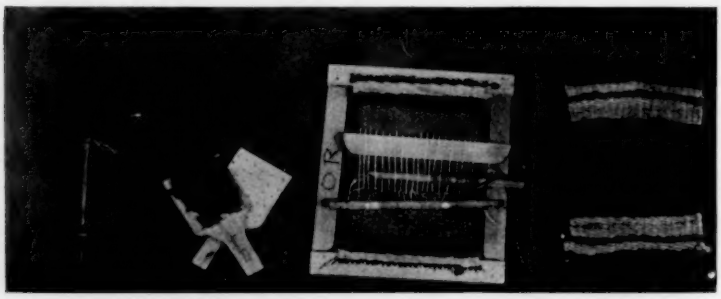
are discussed, and the old way compared with the new. Pictures help very much. Each child cuts a handful of wool from the fleece and examines it very carefully. One child discovers that it feels oily, another that it is not white, another that it is full of burrs and sticks. It is decided that it must be cleaned before it will be ready for spinning. They try cleaning by hand, but this method is decided to be too slow. Some one suggests washing. While talking, some of the children try to twist the fibers with their fingers and usually succeed in producing some short, uneven threads. This gives them a chance to imagine how the pastoral women must have started their spinning. Then they try to use their pencils to wind the thread, and suggest that sticks of some kind might have been used long ago for this. Gradually by getting used to the motion they are able to keep the pencil with the threads whirling, and the idea of the spindle is evolved. These are made of wood by the children and they spin a short length of the coarse wool.

As they decide to wash the wool, tubs of warm water and soap are brought to the classroom. They discover that much energy makes the wool mat together. They also discover that the oily feeling is gone, and that it does not spin as easily. The question now arises as to the best manner of getting the matted condition smoothed out, and finally combing is suggested. It is found that combing with the fingers is not a success, and that even the ordinary comb does not seem strong enough, so it is decided to make special carding combs. These are made of wood 4″ x 9″. The children use rulers, knives, hammers, and nails in construction. Four rows of nails about $\frac{1}{4}$″ apart complete the comb.

The children tried a few experiments with dyeing in their Indian work, so they are asked to suggest vegetables, berries, or roots that might give color to the wool. Such things as grapes, tomatoes, beets, onions, squash, poke berries, and blueberries are usually tried by the children. They cook the vegetables and crush the berries, and dip the wool only to find that most of the colors will not hold. Out of all the materials tried they find only a few, such as grape skins and tomatoes, that are satisfactory in giving a fairly good and fast color.

In the first grade the children had woven grasses on a rectangular frame making use only of their fingers. They now

construct a somewhat similar frame and study various methods of securing the finer woven warp thread to the two end pieces. For the woof they use a manufactured yarn of different colors, blue, brown, black, and white. With this fine material the great length to be pulled through each time proves very awkward, and discussion of some way to relieve the difficulty develops the idea of winding the entire weaving thread on a small stick, thus producing a primitive shuttle. After some further work the amount of time and labor required to raise and lower the individual warp threads becomes very evident, and the advantage of some means by which a whole set of alternate threads



Spindle, carding combs, loom, and rug

may be raised or lowered at one time is apparent. After much study and after some suggestions and experiments several forms of string heddles are developed and put into use.

It is decided that the rugs to be made will be more attractive if several colors are used, and a study ensues as to the easiest and best way to arrange the different colors. Stripes are decided upon, and a few suggestions are placed on the blackboard, discussed, and compared. After this each child decides upon his color scheme, and draws a pattern for his rug, which he carefully follows in the weaving. As a result there is much originality displayed, and a great variety in the productions made. This work occupies the principal part of the first half year, and in connection with it visits are made to the Natural History Museum, and to the Department of Domestic Art in Teachers College, where illustrations and demonstrations of the different processes are seen. The modern methods of carrying on these same processes are also tocuhed upon. As there are

no factories in the immediate neighborhood which can be visited, most of this work is illustrated by means of pictures enlightened by the experiences of children and teacher.

For the shepherds, pottery was even more of a necessity than for the hunter, and the children make a number of clay jars for holding water, and simple bowls for food, decorating them with figures of sheep and other animals. Baskets of splints are also woven for sifting the grain, and for purposes of storing and carrying.

Pottery coiled and moulded in the hand.

In the representation of scenes from pastoral and agricultural life (see article on "Primitive Life") arranged on the sand-table, the types of shelter and the various activities are shown. In the pastoral scene there are movable tents with corrals, cattle, etc.; in the agricultural, a pueblo village or farm. The pueblo and farm buildings are made of clay, built of brick-like pieces made by hand. The farm buildings have roofs thatched with grass or straw, or covered with bark.

These sand-table representations are carried out in the same manner as in the first grade. A general plan is developed from the class, and sketched on the board, or drawn on paper. The divisions of water and land are made, the houses, corrals, and pasture lands located. The children are divided into groups to work out the different parts, one child in each group being selected as director of the group. The value of this coöperative work cannot be overestimated. It sums up and impresses the work of the year upon the children's minds, requires adjustment on the part of each child to the thoughts and ideas of the others, encourages the expression of their own ideas, and tends to unite their interests.

In all the work relating to the study of primitive life, the children's interest is keen, as they feel that they are dealing with facts. They are constantly led to see the part activities have had in the development of social life, to know them in their progressive stages, and through these to appreciate something of how man has developed and achieved results by the exercise of his ingenuity and skill.

Other work of the year is suggested by the nature study, literature, various holidays, and the immediate school needs. In the early fall when the seeds are being gathered from the flowers planted in the garden by the children the previous spring, small envelopes are made for keeping each different kind of

Woven baskets of willow and splint. Braided baskets of raffia.

seed until the next spring, when they will be used again. As each child has perhaps four or five of these envelopes to care for, boxes of cardboard are made to hold them. Books for mounting specimens of leaves and flowers studied are also made. When Robinson Crusoe is being read, sand-table representations showing his cave-house, etc., are made. At Christmas-time boxes or baskets for holding candy, picture frames of cardboard or raffia, or book marks of burlap are made; in March, pinwheels, kites, etc.

A variety of materials is used through the year: grass, ash sprints, rushes, willow and raffia for baskets; clay for pottery, houses, animals, and people; wood both prepared and in the form of twigs for houses, looms, and kites; paper for boxes. books, etc.; wool for weaving; and burlap for sewing.

The technical processes, sawing, nailing, measuring, etc., are largely a repetition of those of the first year—so that skill as well as a greater appreciation of tools and materials and their proper uses is gained.

In all the work, the method gives an opportunity for the exercise of ingenuity on the part of the children, and tends to develop the power of independent thought and expression.

L. H. W.

NATURE STUDY

"The world is so full of a number of things,
I am sure we should all be as happy as kings,"

sings Stevenson, and so sings every boy and girl out of the fullness of his heart in the very joy of living. If the mere sense of being a part of this teeming life has the effect of making a child as happy as a king, is it not reasonable to conclude that a more intimate knowledge of some of these things of which "the world is so full" will make his life broader and more sympathetic and his ideals more elevated and true?

But it is scarcely necessary at this late day to justify nature study as a part of the curriculum of our schools. It has long since earned its legitimate place on our programs, and it remains for us to make a selection, as wise as possible, from the great mass of material ready to our hands. In the second grade of the Horace Mann School the study of primitive life leads to a consideration of pastoral and agricultural peoples, and thus man's dependence upon the soil is impressed upon the minds of the children. The limitation of products which grow without cultivation is a topic for discussion, as is the necessity of tilling the soil as a means of furnishing an abundant food supply to man and to animals useful to man. Thus the economic aspect is not an unfamiliar one to the children, and we take advantage of this fact in the nature work, where we develop the utilitarian idea still further and make it one of the large factors in shaping our course for the year by studying animals and plants with special reference to how they effect man.

We select for this purpose trees, wild flowers, insects, and domestic animals with which our environment makes us familiar, and we plant and study the development of some of the grains and vegetables which are in common use. The seasonal changes also suggest as subjects for study, spring flowers, autumn leaves, berries, and familiar evergreens.

We begin our work in the fall by studying the plants which were started the previous spring in the school garden. These vary from year to year, but usually consist of some of the famil-

iar, hardy plants which attract the children on account of their brilliancy of color, their delicacy, or their fragrance. Nasturtiums, morning glories, and poppies are favorites of the school garden and furnish good material for fall study. Color plays an important part in the fall work. Autumn leaves, bittersweet, color in fall flowers, vegetables, animals, and birds give the child a keen appreciation of harmony, and he learns to look for the advantage or disadvantage in these colors.

The study of seed dispersal is begun out-of-doors, along the roadsides, in vacant lots and parks, where the plant may be seen as a whole. A list is kept of plants which show that seeds are formed from flowers, as butter-and-eggs, evening primrose. The children investigate the way different pods open, the beautiful coloring and carving on the seeds and pods. They see in how many ways seeds are disseminated, using dandelion, milkweed, burdock, stick-tight, and maple. They press and mount a few of these. They learn to recognize many of the wild flowers, the asters, wild carrot, toad-flax in the fall; the hepatica, spring-beauty, anemone, bloodroot, and columbine in the spring. Many of our wild flowers are found on the northern part of the island near Fort Washington and Inwood, or across the Hudson at Fort Lee. We do not attempt to analyze but simply to remember names, and to appreciate their delicate beauty.

Later the children are encouraged to bring in leaves, especially those of the chestnut, horse-chestnut, and sweet gum, as these trees are to be watched through the year.

Excursions to Riverside park and Columbia campus enable the child to see the tree at work, adjusting itself to its life conditions. Attention is called to the shape, the branching, the bark, the leaves, and the fruit. Some of the leaves and burrs are carried back to the classroom. The former are drawn on the blackboard by the children, the latter are examined, noting the prickly covering of the nut, the meaning of the scar, and of the slender tips. Some of the nuts are then planted in order that future developments may be watched.

In the winter months these trees are visited again and their shape, branching, and lack of leaves noticed, while a third expedition in the spring gives a chance to look for buds and blossoms. At this time the development of twigs is watched

in the class room. The horse-chestnut is compared with the chestnut and sweet gum continually in regard to shape, bark, leaves, fruit, buds, flowers, and their development.

In the month of December the evergreens are introduced. Pine, spruce, and cedar are found on the campus. The children compare their forms with those of the deciduous trees, feel of the trunk to see if they are like the horse-chestnut, and notice how the leaves differ from those of the other trees studied. Such questions as "Why are leaves of this shape better for the evergreens than large, flat leaves?" give chance for much thoughtful discussion. The children find the fruit and look for the seed, and are interested to discover in how many ways the tree is of use to us. They notice the gracefulness and beauty of these trees in winter when covered with snow, and their aromatic leaves also are enjoyed. Sketches are made with crayons and water-colors. In order to see the different shaped needles and their arrangement, as well as to fix the name clearly in the mind, branches of white pine, spruce, hemlock, balsam, and cedar are given to each child. These trees, and especially the Christmas tree, give an incentive for stories and songs.

Our dependence upon trees is continually kept in mind—how they furnish us with shelter and with fuel, how much the comfort of our daily lives is due to them.

The indoor work carried on in the classroom and greenhouse enables us to do some careful observing. In the cold months the bulbs of hyacinths, jonquils, and tulips are planted in the greenhouse. Later these are brought into the classroom and some of the peculiarities of bulbous plants noticed: how the leaves grow, how the flower stalk rises from the ground. The plants are compared, both their points of similarity and of difference being noted. The beautiful color of the flowers is a never ending delight, and the children love to reproduce them in crayon and in water-color.

Lettuce, radishes, and other common vegetables are also started in the greenhouse. Each child takes a flower pot, fills it with soil, drops in the chosen seed, and places a small stick with his name on it in the soil. A glass tumbler is also given to each child. In the glass he fits a piece of blotting-paper, fills this with dry sawdust, and between the paper and the glass puts some of the same varieties of seeds that he previously

planted in the flower pot. Then the sawdust is wet thoroughly. These glasses are kept on the desks and watched to see what will happen. A record is kept of the time of planting and of the "happenings." The children notice that the seed swells and wrinkles, that the root grows, that the stem shoots up. Comparisons are made each morning of the different stages of growth and of the differences in the development of the various plants. The effect of the planting of the seed in the pot is also watched. The breaking of the soil, the arched back of the newly arisen stem, the dropping of the seed coat, are all interesting phenomena and subjects for continual comparison with the plants in the tumbler. Later, when similar seeds are planted in the garden, the children will not feel obliged to dig them up in order to see how they are growing.

Garden work begins in April. Each child is given a piece of ground 4 x 6 feet, and prepares his soil, using a hoe, rake, and trowel as implements. The child chooses his seed, makes his furrow, and drops his seed as directed, covering carefully with trowel or rake. The gardens are visited very often, the time of planting recorded, the seeds watered and cared for, and before the close of school in June the children have the satisfaction of seeing "growing things" in their garden. The plants are cared for by the gardener during the summer and one of the first duties in the fall is a visit to the garden to see what may be harvested. This school garden has proved an incentive, and many a child has his own ground where, during the summer, he experiments to his heart's content.

As insects play an important part in the economy of nature they can not be omitted from a course in nature study that has as its controlling principle the human interest in natural things. The grasshopper, katydid, and cricket are selected for this year's work because their structure, function, and life history are less complicated than those of most members of this great family. As these creatures sometimes prove injurious to man we attempt to find out how and why. Their method of locomotion and the rapidity with which they move are practically the only characteristics that can be discovered by watching them in the warm, sunny field in which we find them. So a temporary home is provided by placing them in a large glass jar with sod in the bottom and netting stretched across the top. Here they

can be more closely studied and their devastation of vegetation appreciated as we watch the inroads made upon the grains and vegetables with which we provide them. Their wonderful adaptation to their environment is noticed in their color and structure. The fact that they are interesting and harmless individually, and injurious to vegetation only when they appear in very great numbers is emphasized in order that the children will not be tempted ruthlessly to destroy them.

In their study of primitive life the children have had it impressed upon them that man's comfort is dependent upon the domestication of animals scarcely less than upon the cultivation of the soil. So they are ready to consider such questions as "How are these creatures fitted by nature to be useful to man?" "How can we best care for them?" The animals selected for study are the sheep, cow, horse, and dog. When feasible, visits are made to Central Park where the children may observe the sheep in flocks and singly. They notice the wool, where it is thickest, its color, the sheep's manner of moving (gregarious) and feeding. As many of these children spend the summer in the country, and a number have owned a sheep or lamb as a pet, they are therefore able to give accurate and interesting information learned at first hand. Professor Hodge says: "By its associations with the child's spontaneous activities in caring for his pet this knowledge becomes a part of his life and will enter into the formation of his character to exert its civilizing influence as long as he lives." When possible, a visit is made to a farm where the cow and goat may be seen. The observation is naturally limited, and it is necessary to supplement this with pictures and stories. We have been fortunate in having a beautiful shepherd dog come to the classroom. He has been willing to lend himself for observation and has not objected to the inquisitive but gentle hands and voices. Other dogs have visited us at different times, and enabled us to make comparisons with the shepherd dog. Here again pictures by Mauve, and stories of dogs help our ideas to become clearer.

In the study of the horse the children are asked to observe carefully the different horses they see, comparing the work-horse and the carriage-horse. They are asked to gain as far as possible a knowledge of his disposition and intelligence, as well as the best methods of caring for him, including his food, shelter, the

importance of cleanliness, consideration in the matter of rest and of drawing heavy loads.

Two aquaria have been under close observation in the classroom, a fresh-water aquarium and one with salt water. Tadpoles, snails, and fish are in one, while the salt-water aquarium contains sea lettuce, clams, oysters, and mussels. The children in March watch the development of the toad's eggs and later of the half-grown tadpoles. No formal study is carried on. The aquaria are simply kept in the schoolroom as interesting things to watch and to care for.

As man, together with the plants and animals upon which he is dependent, is greatly influenced by atmospheric conditions, these phenomena are carefully observed throughout the year with special reference to their effect upon life.

A rainy day gives opportunity to observe the dark clouds that bring rain. Water, its uses to plants and animals, frost and snow and their effects, are each observed in turn. Such points as the power of water to float things, its uses in preparation of food, its help in transportation and fire, its necessity for the growth of plants, and for the life of man and beast, make the children realize our dependence upon it. In the lesson on snow the crystals are caught and the size and shape examined. Some of the memory sketches show that the children have observed carefully the softness and thickness of the covering snow spreads over the earth, and its use to plant life is discussed. In connection with this we learn bits from *Snowbound*, Emerson's *Snow Storm*, or the first verse of Longfellow's *Snowflake*. We even aspire to make our own snow poems, and the results are often unique.

In a lesson on the wind the class is taken out-of-doors and the bending of the trees, the movements of the clouds, and the fluttering of flags and handkerchiefs noted. The directions are taught from the position of the sun, and the children are soon able to announce when they come to school: "There is a west wind this morning." From this time on their attention is called to the direction of the wind when it rains, when it snows, when it is fair. F. D. Sherman's *The Four Winds*, and Eugene Field's *Night Winds* are great favorites at this time. Temperature, its relation to winds and its effect upon the habits of man, animals, and plants, is continually kept in mind.

And why is all this done? That the child may learn to love and value the perfect laws of nature by his own observations and comparisons, for surely nothing will help to civilize and humanize our children more than getting at the heart of nature. Also the more the child knows of life the greater will be his desire to protect, the less to destroy. Besides all these benefits it gives an added interest which he carries into all his school work and makes his own life fuller and richer every year. Heine says: "Nature, like a great poet, knows how to produce the grandest effects with the fewest materials. You have only a sun, trees, flowers, water, and love. In sooth, should the last be absent from the heart of the beholder, the aspect of the whole may be poor enough, for then the sun is only so many miles in diameter, the trees are good for fuel, and flowers classified according to their stamens, and water is wet."

E. B.

ART

A high authority in the educational world has recently said that the end and aim of all education is the development of appreciation, or judgments of worth; that a knowledge of truth is but the beginning of education. Judgments of fact are the beginning, judgments of worth the end. If this be true of general education, it is true of art education in a special sense, for knowledge of art-form, experience in creative effort, and training in art expression, all these are outgrowths of appreciation. Then we may say that the purpose of an art course in the elementary school (and in fact in all schools) is to train the power of appreciation.

The art course in many schools at the present time is based upon object drawing. This tends to narrow the child's experience to the single art of painting. Such drawing is a necessary part of an art course, yet it is only a part, and we believe that the course should be made as broad and as inclusive as possible, to awaken the appreciative faculties early and strengthen and refine them as the child progresses. It seems to us that since there are analogies of structure in all the fine arts, the training in the elementary school should not only quicken the child now, but should also serve as a preparation for creative work in other special directions, not only in the space arts (painting, sculpture, architecture, and design), but in the other fine arts as well (music, poetry, and dramatic art).

In the second and third grades we find the child at a very impressionable, a very enthusiastic age. He enjoys every kind of occupation, and while he will do some things surprisingly well, advanced standards of excellence must not be forced upon him. His teachable attitude and freshness of vision must be allowed to grow along healthful, natural lines of appreciation and power to do, preserving always the spontaneity and naiveté that form his chief charm. It is now a simple matter to bring to the child the beauty of the world. For example, rhythm of movement can be expressed not only by dancing and music, but by lines and spots of color. At first there is wonder, but in a

little while the child comes to know that these new things are the same old things he has seen everywhere. He invents, he creates for himself in rhythmic pattern and color. The flowers bending in the wind, the animals at play, the dances of children, all can be subjects for this new expression. A new world is open and the joy of exploration is stimulated. From so small a beginning the idea of harmony may grow to form a part of the child's life. We do not expect a manifestation of much appreciation, but are content if the pupils are trained along lines which lead to appreciation.

The main divisions of the art program should be these:

a. Work that calls for exercise of judgment and personal feeling as to arrangement and color. This may include simple patterns with application, and pictorial drawings of flowers, trees, houses, animals, figures, and landscape.

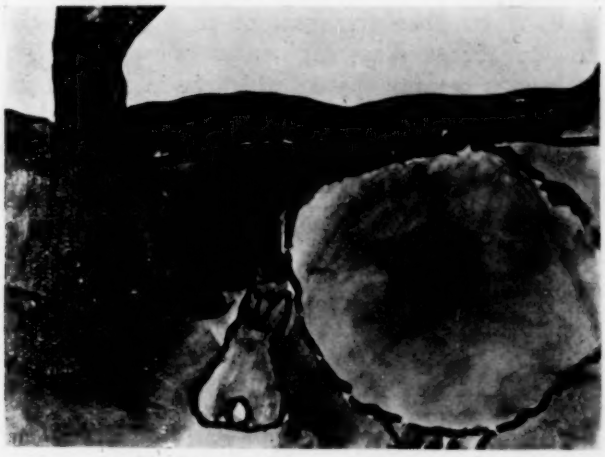
b. Designs, drawings, or pictures relating to other subjects in the curriculum.

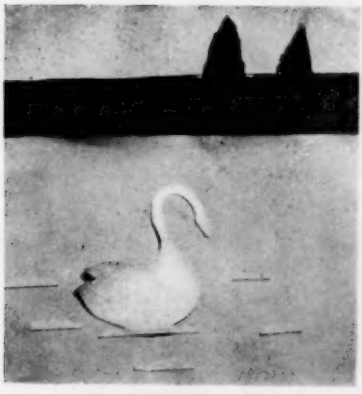
c. Drawing and painting from nature.

The subjects used for art lessons are as varied as the child's interests. He is studying flowers, seeds, fruits, vegetables, domestic animals, pets, and some of the simple processes of agricultural and pastoral life. He is reading fairy tales and Mother Goose stories, so he paints, draws, and cuts these things. Sometimes he works directly from the object, sometimes from large drawings made by the teacher, and again from memory or from imagination.

Nature-drawing may be nature study and only distantly related to art, or it may be both representation and art. To us it seems a mistake to give nature-drawing in only the former way in an art course. We think that since combinations of lines, masses, and colors form the basis for all visual arts mere nature-drawing is a special and limited field, and that, unless there is an art use for it, it becomes merely formal. We will illustrate this point with flowers, although any other natural form or object would answer as well. In the fall we draw and paint flowers, not because we think that this is the foundation or beginning of an art course, but for reasons of convenience. The flowers which the children planted in the spring are now blooming in the school garden. The children are especially inter-

ested in these flowers and are happy to use them. Furthermore the school is so situated that it is easy to get the wayside flowers. We do not, however, even at this time confine the work to nature studies alone, but use them in a manner that gives opportunity for free personal choice, comparison, selection, and invention. The children make covers for their pressed leaves or flowers.





Illustrations of the arrangement of the masses (see page 26).

On these they paint a flower or leaf and add the simple letters. Or we have them make book-marks, or any other things that can be used and on which a flower illustration will be appropriate.

Illustration may be purely literature, recording facts, a kind of picture writing; but as a subject in an art course it must be much more. While we do not attempt to make little children compose pictures, we adopt various expedients for causing them to think of arrangement, interesting masses of dark and light, and of color harmony. The last is easily secured with small children by giving them a set of crayons or colored papers in harmonious tints. The arrangement of masses is rather more difficult. One or two approaches are suggested. The child may cut from paper the objects which he intends to put in his picture and may be induced to play them about until he finds an arrangement which he likes better than others. Or a landscape background already cut and pasted may be taken into the class and the children may be asked to cut the figures and animals and place them in the landscape. At other times several different drawings of the subject for illustration may be made on the blackboard and the children questioned as to their choice, and their reasons for it. Or the teacher may be allowed to make the drawing at the dictation of one child or the class, being told what to draw and where to draw it.

The study of pictures will acquaint the child with what is good and, unconsciously, help him to make his own picture. Of course little or nothing can be said to a small child about the art structure of a picture because this does not appeal to him yet. It is the subject, the action, the color which appeals to him now. For this reason those pictures which are simple are best. It does not follow that poor or even mediocre pictures should be given him simply because they tell a story or are bright in color. They must be good, though not necessarily the greatest masterpieces. The principal works of such artists as Bontet de Monvel, R. Anning Bell, Nicholson, Carton Moore Parke, Kate Greenaway, Walter Crane, Elizabeth Shippen Green, Jessie Wilcox Smith, Millet, Landseer, Rosa Bonheur, Madame Ronner, Eugene Lambert, and John Swan, certain Madonnas by the masters, and some Japanese prints, may be procured in inexpensive form. Let the children attempt to copy parts or the whole of some of these for study of action, color, and construction. Stories relating to the picture under discussion, or to the life of the artist, may add to the interest. Children often distinguish between good and bad pictures far better than

adults imagine. In this school a short time ago a second-grade teacher found that one of her little girls had cut all the illustrations out of a story book she was reading. When asked why she had done it, she replied "Because I did not like them." Why did she not like them? They were not pretty like the ones she thought herself. She said she always cut out and threw away the pictures that she did not like in her story book.

For figure drawing we prefer the moving pose to one that is sustained. The child after holding a position for a time becomes tired, and therefore no matter how happy and proud he may be of the honor of posing he loses the lines of action. On the other hand, if he performs an action, walks, runs, stoops, throws a ball, catches an apple, and holds the pose no longer than the action requires, it is full of interest and life. In drawing the moving pose, the child must be alert and intent while it is acted. He has time to seize only the impression of the whole, the vital

lines, and he paints his little figure with spirit, with life. There has been no time to notice and draw buttons or other unimportant detail. For more careful study of proportion he draws from large charts prepared by the teacher. In giving a lesson on figure drawing, we call a child to the front of the class and ask him to perform some action, ask him to run, for instance. The children are asked to notice the line of the back. He runs several times until the children have that line fixed in mind. Another child runs in order that the first may see. Next notice the line of the supporting leg, then the lines of the other leg. Notice the relation of the head to the line of the back, the position of the arms, where the leg bends, where the knee is. Here a little girl runs to show that the knee is barely visible below the short skirt. Children are very apt to draw the bend

much lower, perhaps half way between the knee and ankle. Notice that the elbow comes at the waist. If there is time, it is very helpful to have a child at the blackboard draw the angle of each line as we talk of it. By the time we are ready to paint several children—both boys and girls—have run. The class may be told to paint a boy, or a girl, or each child may be allowed to choose the one he prefers. They paint in mass, directly with the brush, and have plenty of paint mixed before they begin. Far more is gained if the work is put up for the class to criticise, and the class then tries again immediately. At the next lesson the teacher will bring in for copying several large charts with good drawings of a child running in different positions. This time the drawing is made in pencil outline that chance may be given for correction of mistakes. It is surprising to see how much the

Child churning.

class sees and how the children enjoy improving their drawings. When the outlines are as good as they are able to make them, are better than their mass painting of the former lesson, they paint in full color. The child churning, illustrated herewith, was given in connection with the study of agricultural life. When the class studies about butter-making each child churns and makes butter in the manual training lesson. We take the same subject in the art period.

A little work in design is given in this grade. Motifs for elementary pattern consist of natural forms, or groupings of lines and spots. Rhythmical borders of straight lines are given

first. These are followed by patterns for small rugs to be woven with the manual training teacher in connection with the primitive life work. These are simple banded rugs for which the child chooses the number of bands, the spacing of them, and his colors. Later borders of flowers, trees, animals, and figures, are made and sometimes applied to bowls, book-covers, festival cards, and such things. A series of lessons may be given in the following way. Paint, colored crayons, or colored papers may be used.

Lesson I. A straight line border in two harmonious colors, one light, one dark. If this kind of creative effort is new to the children, connect it in some way with their experience in other forms of rhythmic movement such as music, marching,dancing.

In one class the children were asked in what order they marched to chapel. The answer came, "Two and two." The teacher drew this on the blackboard. The next question was how did they march to gymnasium. The answer came immediately this time, "One and one." This was drawn on the board. Next,"Did they ever march in any other way?" "Yes, in the gymnasium they marched four and four." One boy said, "Soldiers sometimes march twenty abreast." These arrangements were put on the board. It was easy to see that we could not have groups of twenty lines. It was decided to use groups of one, two, three, or four lines, so that we could alternate three and two, two and one, and so on. The children were each asked to think what grouping they wanted, how long and how wide the lines should be, whether all should be the same length and width, how much space should be between the groups, between the lines in the same group. If there is time, let each child make two or three borders of different spacings, and judge for himself which is best, or put up all of the work in the front of the room for a class criticism. This problem of dividing a given space by a few vertical lines may seem to some very simple for second grade. But it may be done in a very beautiful way, a very great way. It certainly is a far cry from these childlike efforts to the superb triglyphs of the Parthenon, yet it is the same problem.

Lesson II. A border of flowers, three colors, one for background, one for stem and leaves, one for flowers. Care is taken to choose colors of different values.

The last lesson is referred to, and a few of the borders shown.

The children are asked if they have ever seen flowers growing in a row? Yes, they have. Where? Some have planted them in that way in their own little spot in the school garden, or they have seen them in gardens in the country. There may be at this time a row of hyacinths, tulips, crocuses in the window box. Very well, then make a row or border of flowers. Each child chooses his own flower, and draws from memory. If there is time, each may choose his own colors.

LESSON III. At the last lesson, each child made a small border of flowers. This time the whole class will make one large border, and each child will make one panel for it. The teacher may select the flower or the class may. It is well to bring a few of these flowers into the room, or, if that is impossible, draw several on the blackboard. Similar exercises may be given using fruits, trees, animals, children, for the motifs.

The experience gained in spacing borders will help the child in the far more difficult spacing of pictures, provided the pictures are very simple, a flower, an animal, a child in a space, a landscape, sky, grass, trees. Any lesson may be repeated as a memory exercise. Last year in one class the last exercise in this series was a frieze, eighteen inches high, across the front of the room. This was placed just above the blackboard. It was made in panels. Each panel was composed of a simple landscape background with some domestic animal or fowl placed within it. The teacher cut and pasted the large parts of the background, sky, grass, water. The children cut and placed the animals, fowls, ripples on the water, and other small parts.

Festivals may serve as occasions for direct application both of elementary design and pictorial illustration. If only a print be pasted on a card, the child exercises choice in spacing and in the color of card. If he paints or cuts the picture, there is further choice and selection.

We use different materials, water-color paints, colored crayons, pencil, scissors, and colored papers. The work is done sometimes in mass, at other times in outline. Often the same subject is done in both ways. In such cases the mass painting is given first, afterward the outline drawing. Our reasons for this order are that we believe that in working in mass the child looks for the large general character, which is most important, and is the thing we want, but that if he works in mass alone,

for any length of time, he becomes careless, because in this way it is quite easy to get an effect that satisfies him. When he is satisfied he makes no further effort and therefore his improvement is slight. To bear us out in this point we should like to call attention to graded school exhibits where mass drawing and painting is adhered to. In these exhibits it is quite noticeable that the work improves for the first few years, but that in the grammar grades it is little if any better than in the primary grades, oftentimes not so good. We think this lack of improvement may be overcome by outline drawing or paper applique; for both of these methods of approach naturally demand closer study. Mistakes in an outline drawing are glaring. The child is no longer satisfied, consequently he renews his effort. And it is by effort, and the awakening of his critical judgment which constantly spurs him on to new effort, that he grows, and

Easter card, block print outline.

growth is the essential in all study, in all living. We have found no medium that makes the child's idea so clear to himself as paper applique. In this material the edges of his masses must be definite, quite different from the uncertain edges that he may get in other mediums. For this reason the same lesson may with profit be given twice. But here we should give the scissors and paper first and follow it with mass painting, quite the reverse of the order in mass painting and outline drawing. It will be seen that lessons are progressive, given in series, not single detached subjects. Yet the subject or material is changed often enough to bring the interest back to a fresh starting point.

As often as time will permit, the work of the class is put up

in front at the close of the lesson, so as to give the children an opportunity to compare their own work with that of their friends. They talk, compare, and criticise it. Each one is eager to give his opinion.

If at the end of the year the children can put a little more beauty into their work than at the beginning, if they can see their own mistakes and the mistakes of their classmates more quickly when the work is put up for criticism, and can know a little more surely how to correct these mistakes, if they can see the good points and tell why they are good, they have gained as much as we expect.

M. C. U.

READING AND LITERATURE

Most children come to the second grade with their desire to read stimulated by the beginning made in the first year. They know that being able to read fluently will enable them to get for themselves the stories of which they are so fond. Our first care, then, is to select reading material of some literary value which will interest the children and arouse enthusiasm to a degree which will place the drudgery of word-getting in the background. An interesting book for the beginning of the year, and one which contains many a favorite, is Haliburton and Nowell's *Graded Classics*, Book II. For an advanced class Baker and Carpenter's *Second Year Language Reader*, or Baldwin's *Fairy Tales and Fables* would be better. Some of our reading material is selected because of its relation to other lines of work as *Children of the Cliff* and *Lodrix*, by Wiley and Edick. Both of these books deal with the lives of pastoral people. Dutton's *In Field and Pasture* gives glimpses of various people in primitive times and is especially good on account of its many excellent illustrations. Children gain from such books as these not only valuable information, but also many ideas for invention along the lines of handwork and art. Other books which we use and which are greatly enjoyed are *Graded Classics* Book III, *Letters from a Cat*, H. H., and *Old Greek Stories*, Emma Firth.

We believe in allowing the children to read a great deal this year merely for the sake of practice. They acquired in the first grade a good vocabulary and some power of word-getting, and now need an opportunity to use this knowledge. In many of our reading lessons the words are easy and the language simple and readily understood, so that explanations or comment by the teacher are unnecessary, providing the children are interested. If the reader comes upon a word which he does not know, he is told. Stories are read usually only once. Many of the new words will occur again in the next lesson and the child will gain more power by reading something new than by rereading what is already half memorized. Favorite stories or

poems are, of course, frequently chosen by the children to be read several times during the year.

As an incentive to reading at home, the children are often allowed to bring a book to school and entertain their classmates by reading to them. A child who has no suitable book at home is given one from the school supply. A collection of books in the schoolroom from which a child may draw when not otherwise occupied is also a pleasing incentive. The teacher occasionally reads a part of a story to the children, leaving it at an interesting point for them to finish by themselves. The book from that time on is in great demand.

It is now a well recognized fact that a knowledge of phonetics is of invaluable assistance to a child who is learning to read. It gives him the power to discover new words and thus become independent. The second-year work deals principally with the sounds of many combinations of letters such as *oa*, *ea*, *ai*, *er*, *ir*, *ur*, *or*, *ar*, *ay*, *ight*, *kn*, *wr*, *sc*, *tch*, *ow*, *on*, and *th*. If *th* is the new sound to be taught, the children pronounce such words as thick, thin, think, and then listen to the first sound as the teacher pronounces. Many words containing the sound are then written on the blackboard and pronounced by the children. Later, words containing different phonograms are placed before the children such as meat, beet, boat, and they tell the letters which make the phonogram and give its sound. Time is saved by giving the children printed lists of words and allowing them to pronounce in turn, after the new sound has been taught. Concert work in this exercise is not good, as it gives an opportunity for careless pronunciation on the part of some children and the habit of depending upon a leader. The reading lesson for the day often furnishes a motive for the lesson in phonetics. If such words as *apart*, *amount*, *voice*, are among the new words of the lesson, these and many other words containing the sounds *ar*, *ou*, and *oi* are given in the phonetic lesson which precedes the reading.

Perhaps in the second grade more than in any other a teacher is obliged to work for expression. The children now are so intent upon word-getting that they often fail to grasp the meaning of a sentence, and as a result read words rather than ideas. To prevent this, a child must be fairly sure of the words and the thought in a paragraph before attempting to read it aloud.

Sometimes a study period is given in which the children read silently, jotting unfamiliar words on a slip of paper. These words are then put upon the blackboard and studied. Again, a moment is given during the recitation period for the child to look through the next paragraph and get the thought before reading aloud. In the case of a paragraph which especially demands expression as, for instance, this from the story of *The Little Match Seller:* "Now her little hands were almost frozen with the cold. Ah! perhaps a burning match might do some good, if she could only draw it from the box and strike it against the wall. It might warm her fingers. She drew one out. Scratch! How it spluttered as it burst into flame!" a few leading questions are asked before the paragraph is read aloud. "How cold were her hands? What sudden hope entered her mind? Show in your reading the sound of the match as she struck it."

Many stories are dramatized and then reread with a great gain in expression. Our singing lessons help, too, for through music the children are taught to bring out the feeling of such words as *cold*, *frozen*, *bright*, *airy*, *long*, *far*, *poor*, and they unconsciously put the same feeling into these words when they come upon them in their reading.

During the year the children become acquainted with many stories and poems, some of which are studied and memorized, such as *The Wind*, Stevenson; *The Clouds*, Sherman; *Frogs at School*, G. Cowper; *The Duel*, Field; *The Day*, Dickinson. Others are merely read to the children. Teachers are sometimes inclined to underestimate a child's ability to grasp the main thought and the beauty of a selection. Children listen with great interest to and apparently appreciate the beauty of such poems as *Snow Bound*, Whittier; *Robert of Lincoln*, Bryant; *The Night Wind*, Field. Some selections they like for the music there is in them, as Tennyson's *Song of the Brook* and Longfellow's *Hiawatha*.

Our aims and methods of teaching literature are so similar to those of the first grade as described in the January number of The Teachers College Record that a description here would be superfluous. The task of memorizing has become easier as the children are now able to read. Usually a printed copy is given to each child, and after the entire poem has been read by the teacher, each verse in succession is considered as to its

thought, beauty, and rhythm. When the thought is clearly understood so that a child can read intelligently, one and then another is allowed to read the first stanza. In this way the lines soon become so familiar that their memorizing requires little effort. Among the stories that are told the children are those of David, Abraham, and Joseph from the Bible, *Robinson Crusoe*, and *Story of the Flax*, *The Fir Tree* and the *Emperor's New Clothes*, by Anderson. A large part of *Robinson Crusoe* is read to the children from the original because of its literary value. Opportunity is given for discussion, and many ways out of Crusoe's difficulties are suggested by the children. We often dramatize some of the scenes between Crusoe and Friday and give the children free use of the sand-table that they may construct his island home.

Reading to the class is an excellent practice, as we can rely upon a child's habit of imitation to produce the desired result in his reading. Through the teacher we can give the child not only an example of good oral reading, but can fill his mind with many of the beautiful ideas of literature long before he can get them for himself.

Our aim during this year is to give a child sufficient practice to enable him to read with comparative ease and with pleasure, while at the same time we aim, by careful selection of material, to lay the foundation for a taste for good literature.

The following is the list of poems from which we make our selections both for reading and for memorizing:

The Wind	Stevenson
Brook in Winter	Lowell
Night Wind	Field
The Day	Dickinson
The Grass	"
Summer Shower	"
Sweet Peas	Keats
Snowflakes	M. M. Dodge
March	"
March	Celia Thaxter
May	"
Sir Robin	Lucy Larcom
Dandelion	J. Tabb

Now the Noisy Winds are Still ..... M. M. Dodge
Kriss Kringle ..... Frank D. Sherman
Barefoot Boy ..... Whittier
Arrow and the Song ..... Longfellow
Visit from St. Nicholas ..... C. C. Moore
Land of Nod ..... Stevenson
Dandelion ..... Nellie Barabrant
The Snow Bird ..... Sherman
Wizard Frost ..... Sherman
September ..... H. H.
Good-Night and Good-Morning ..... Lord Houghton
Evening at the Farm ..... Trowbridge
The Cloud (1st stanza) ..... Shelley
Before the Rain ..... T. B. Aldrich
The Potato ..... Thomas Moore
March ..... Wordsworth
When Icicles Hang by the Wall ..... Shakespeare
Snowflakes (1st stanza.) ..... Longfellow
The Pied Piper of Hamelin ..... Browning
Good-morrow, Little Rosebush ..... J. Stacy
Frogs at School ..... G. Cowper
Dandelions ..... H. G. Cone
The Duel ..... E. Field
K. W.

LANGUAGE

Charles Lamb believed that it was well to turn a child loose in the rich fields of literature and let him browse where he pleased. He is indeed a fortunate child who has a chance to become acquainted with books in the library of his own home, such books as *Water Babies*, Lamb's *Tales from Shakespeare*, *The Jungle Books*, with many of the simpler poems children love because they are so rich in fancy, so vital, so genuine, or so heroic. Unconsciously the child absorbs many new ideas, and adds to his rather limited vocabulary new words and phrases as he reads. He was charmed with the rhythm of verse in his baby days and now at eight years he is ready to feel the beauty of an exquisite lyric phrase as keenly as does many an older person. In order to further encourage and foster literary taste, stories that are too difficult for the children to read themselves are read or told to them by the teacher, and poems are memorized and sometimes dramatized.

Children speak more than they write, and for this reason special attention is given to oral expression. Once a week the children are asked to be ready to tell a "made-up" story, relate some experience, or recite some poem or nonsense rhyme. This exercise aids them in acquiring facility and fluency of expression. Oral expression is also made a prominent part of the observation lessons and of the drawing lessons. After an observation lesson in nature study, the unusual words that the subject may have called up are written upon the black-board and the child is required to define and use these words in new sentences. The unusual words met with in studying a poem are explained after the poem has been read to the class unless it is found that the children are able to grasp the meaning of the new words from the context. Volunteers are then asked to read one passage or stanza that appeals especially to them, and to tell why they like it. They often begin by choosing lines that jingle, but very soon the class learns to look for those that are musical, that make a picture, or that are full of color. A class that recently read Emily Dickinson's *A Day* found great delight in such lines as:

"I 'll tell you how the sun rose,
A ribbon at a time,
The steeples swam in amethyst,
The news like squirrels ran,
The hills untied their bonnets,
There seemed a purple stile
Which little yellow boys and girls
Were climbing all the while."

In fact, the children were so charmed by this and by other poems that they wished to try their hand at making original poems. One very small boy produced

COLD FEBRUARY

"The snow is cold,
And I am hot,
I love the winter time a lot."

Another was more expansive. He wrote,

"The ships were in the harbor,
It was May, it was May.
Not a breath of wind was stirring
As they lay, as they lay."

Various exercises are planned with the double purpose of giving the child a chance to exercise his powers of imagination and of encouraging spontaneity of expression. One of the favorite exercises of this character is as follows:

Several words are written on the board such as *wind*, *kite*, *wild*, *gloomy*, *forest*, *gentle*, *March*. Each child chooses a word or words and tells what picture is brought to his mind. When asked to give an idea of March one child said: "Oh, he is a short, stout chap with brown eyes and very red cheeks, his clothes are rather old, he does n't wear any cap, but he 's awfully jolly. He likes to play jokes and I think he lives out-of-doors somewhere."

Dictation is given three times a week for a period of twenty minutes the first half year, the last half year twice a week, the other periods being devoted to oral expression in different forms. These dictation lessons bring in the use of the capital, period, question mark, apostrophe, and of simple abbreviations. Often

the topics used in dictation are taken from nature study, manual training, or reading.

Spelling

It requires both clear vizualizing and accurate memorizing to give the child the power to spell the necessary words in his vocabulary. Words varying from six to ten per day in number are written on the blackboard, sounded, used in sentences, copied carefully and studied at home. The following day they are written from dictation in the spelling-books, either individually or in sentences. Copying poems or short stories that are worth remembering is one way by which good habits in the use of language may be impressed on the child. By these means he has gained in the power to make himself understood as well as to understand others.

E. B.

PENMANSHIP

It is comparatively easy for the child to form a mental picture of the correct forms of the individual letters of the alphabet, but it is difficult for him to reproduce these letters in an easy, fluent manner, especially when they are grouped in words. The difficulties in the way of good penmanship are largely physical, and result from the child's inability to control and coördinate his muscles. Improvement, therefore, is slow and is the result of much patient practice. The essential thing is that the child be stimulated to do his very best at all times, and that he never be allowed to write carelessly. The child, particularly in the primary grades, must be made to realize that in all his writing he must take the same care that he does during his penmanship lesson. If this is consistently done, it will be necessary to devote very little time to the formal teaching of penmanship.

About fifteen minutes each day are devoted to the formal teaching of penmanship in the second and third grades. The so-called "natural slant" is the standard of the school. The penmanship period is devoted to teaching a correct position at the desk, to holding the pencil or pen properly, to writing from a copy placed on the blackboard, to drill in writing individual letters or groups of letters, or to free arm movement in swinging the pencil for ovals to gain freedom and speed.

Considerable attention is given to a correct sitting position while writing—both feet resting squarely on the floor, back straight, paper placed directly in front, left hand keeping the paper steady. An easy, natural way of holding the pencil is emphasized. If the child grasps the pencil too tightly, as is generally the case, he is urged not to "choke" it. While a reasonably correct position is important both from a hygienic point of view and as a means to further progress, much valuable time may be wasted in the effort to secure a uniform standard. We must remember that children are unlike physically as well as mentally, so within certain well defined limits each child should be allowed to work out for himself a position of body and a way of holding his pencil that is easy and natural. Wide

variations from a reasonable standard, however, should be checked, and in such matters the teacher should use her best judgment.

It is very important that the child form not only a correct standard of his own, but also the habit of criticising his writing with reference to that standard. In bringing this about it has been found helpful to have individuals or small groups of pupils write on the blackboard while the rest of the class act as critics. Considerable attention, too, should be given by the teacher to individual suggestion and help while the pupils are writing from a copy. The wise teacher will not be too critical, however, but will give all the encouragement possible. Young children may easily be made too conscious of their short-comings. The copy used is generally a line or stanza from some poem that the class is studying.

Pen and ink are used for the first time in the third grade. The use of the pen is in a way an incentive to effort, but the stiff steel pen is an awkward and unmanageable implement after the pencil, and though children enjoy the distinction of using it, they find the results discouraging. Here again, however, patience and much practice will soon smooth away the difficulties.

ARITHMETIC

The arithmetic of the second grade is related, as far as possible, to the child's needs and immediate interests. The work in manual training and nature study, as well as the many incidents of his daily life, requires some knowledge of measurements and comparisons. While much of the so-called drill work is left for the third and higher grades, where a child's mind is better adapted to such work, a small amount, made interesting through games and various devices, is given the second grade. The following outline shows merely the subject matter with no reference to the order of presentation, for we follow, in a reasonable degree, a spiral method. Constant repetition is perhaps more necessary in arithmetic than in any other study, and in this subject it is absolutely essential with little children. One week, therefore, spent on liquid measure does not mean that the subject is ended for the year. It is presented again a few weeks later, perhaps three or four times during the year, each time in a new way, if possible, and with more difficult problems.

COUNTING.—By 1's, 5's, and 10's to 100; 3's to 30; 4's to 40; within the space 1 to 20 by other numbers as used in the addition table.

WRITING OF NUMBERS.—Place value of units, tens, and hundreds, numbers written to 1000.

MEASUREMENTS.—Inch, foot, yard; dollar, half-dollar, quarter-dollar; pint, quart, gallon; second, minute, hour, day, week, month, explained; reading time by the clock; writing the date, *e. g.*, Friday, December 7, 1906.

ADDITION.—The tables through 9's.

SUBTRACTION.—Inverse cases of addition.

WRITTEN WORK.—Numbers of three orders in column addition, the sum of no column to exceed 20. Subtraction without borrowing. All written work limited as to time to secure rapidity.

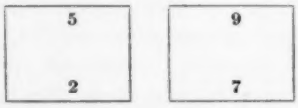
FRACTIONS.—Halves, fourths, and thirds of single objects and groups of objects.

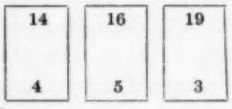
MULTIPLICATION.—The two, three, four, and five tables.

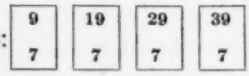
SYMBOLS. $+$, $-$, $\times$, $\div$, $=$.

PROBLEMS.—Counting is used to pave the way for the work in addition and multiplication. Objects are used at first,—books, desks, chairs, pencils, blocks, sticks, dots, and circles. After counting a few times, the children like to close their eyes and count, and a day or two later have a race to see who can count fastest. They soon begin to use this knowledge in other ways, for it takes only a short time to discover that the one who counts his seeds, beans, corn, or nails, by twos or threes is ready for work first.

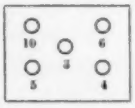
Each new fact in addition is taught by the use of objects or by analogy. A few of the devices used to fix this knowledge are as follows:

Large cards 

are shown for an instant, the children stating the sum or difference. Later in the year another series is shown: 

and still later this series: 

One of the best games which we use is suggested in Smith's *Primary Arithmetic*. It is made by cutting holes in a cardboard



box numbering each hole. Two children are selected to drop marbles into the holes from the height of a table, and one to announce the points made. The rest of the children keep the score, and tell the result in this way: "Helen had 16 points and Charles 7; so Helen won by 9 points." This game keeps every child at work and encourages rapidity and accuracy, as those who are ready first with the correct result are allowed to be the next players. The game of dominoes is another favorite, each child keeping his own score. Frequently the teacher gives a problem, ½ of 8 and ½ of 10

equal what number? Each child writes his result on a slip of paper, and several more problems are given. The correct list is then read by the teacher.

Subtraction is taught through addition or by the "making change" method. The child sees $\frac{8}{-3}$ and thinks immediately of the number which with 3 makes 8. This number(5) he speaks of as the difference between 3 and 8. He can now tell the difference between his age and the age of his brother or friend. The old-fashioned game of "hull gull" is introduced. The children play in couples. Each child counts out 20 beans, or only 12 or 15, if he is not familiar with the combinations to 20. A takes a few beans in his closed hand and says to B, "Hull gull." B says "Hand full." A "Parcel how many?" B guesses 5. A counts the beans in his hand and finds he has 10. His opponent gives him the difference between 5 and 10. The one who has the greatest number of beans when the time is up wins.

The knowledge of all measures comes through the actual handling and working with them in the classroom. Each child has a foot rule which he uses constantly in all kinds of constructive work. A yard measure is at hand and is used in measuring the warp thread for his loom, the string for trellises, the dimensions of a garden, etc. He learns to know a dollar, half-dollar, and quarter and is sent to the bookstore to make his own purchases of books, pencils, and all materials. The simple cooking in connection with his primitive life work gives him practice in the measuring of pints and quarts. He is taught to tell time by the clock, and is held responsible for being ready for recess and the gymnasium without a reminder.

Early in the year the children receive the idea of tens and hundreds from the use of sticks. Each child makes his own bundles of tens and uses them with the single sticks until thoroughly acquainted with the numbers of two orders. To teach the connection between a certain number and the figures which stand for it the teacher writes in figures on the blackboard the number of sticks which the children show. If twenty-one, a child will say at once that the two stands for the two bundles of tens, and the one for the single stick. Then the teacher shows the sticks and the children write the number shown. The placing of numbers for column addition comes very easily after this work, for the child quickly sees that a bundle of ten

sticks and two single sticks cannot be added in the same column. Much practice in this simple addition is given before the idea of carrying is introduced. This is taught in a similar way. The children are asked to add eight and twenty-four sticks, and to tell how they found the result. Almost invariably some child will say that he has two tens and twelve ones, which is the same as three tens and two ones, or thirty-two sticks. After several problems of this kind, figures are introduced.

The ideas of halves, fourths, and thirds are presented to the children in various ways during the year. By way of illustration, the children fold and cut circles, squares, and oblongs, and arrange and mount them on cards to show the relation of the parts. The making of envelopes and boxes for seeds gives practice in measuring $\frac{1}{2}$ and $\frac{1}{4}$ of an inch. The warp thread for our looms is $5\frac{1}{3}$ yards long and the heddle string $1\frac{1}{2}$ feet, thus requiring the knowledge of the parts of a yard and of a foot. In teaching $\frac{1}{2}$ and $\frac{1}{4}$ of 100, preceding the parts of a dollar, each child has ten bundles of 10 sticks each and fastens them together to show 100, and then separates them into groups, showing $\frac{1}{2}$ and $\frac{1}{4}$ of 100.

The beginning of multiplication follows naturally the work in addition, and the child soon discovers that the result of five 3's can be found more quickly by saying 5 times 3 than by adding a column of 3's, or than by counting by 3 until the result is reached. The meaning of the sign $\times$ is explained and the children are taught to express their work in two forms $3 \times 3 = 9$ or

$$\begin{array}{r} 3 \\ \times 3 \\ \hline 9 \end{array}$$

. While work on the multiplication tables is begun in the second grade, more emphasis is placed upon it in the third, and a description of that work will be found in the third grade article.

Many of the problems are related to the nature study and manual training, and thus become real problems which the child needs to solve. As a usual thing only one operation is involved and the work is largely oral. A few typical problems are as follows:

1. If Helen plants 4 seeds in each flower-pot and there are 4 pots, how many seeds does she need?

2. This piece of wood is 18 in. long. You need a piece 14 in. long. How much must be sawed off?

3. If you use 4 pieces of raffia in each strand of your braid, how many will you use in all?

4. Herbert brought 14 marbles which is twice as many as we need for our game. How many shall we give back to him?

5. If your arithmetic costs 28 cents and your reading book 30 cents, what will be the cost of both?

6. If you give the conductor 25 cents with which to pay your fare to school, how much change will he give you?

During the second half of the year the children are taught to express in figures the operations involved in solving the problems:

1. 4×4 seeds $= 16$ seeds.

2. 18 in.
$- 14$
4 in.

3. 4 pieces of raffia
$\times 3$
12 pieces of raffia

4. $\frac{1}{2}$ of 14 marbles $= 7$ marbles.

5. 28 cts.
$+ 30$ cts.
58 cts.

6. 25 cts.
$- 5$ cts.
20 cts.

Toward the end of the year Smith's *Primary Arithmetic* is introduced. The work given in the first two chapters is merely a review for the children, but the fact that the book is now the teacher, that the examples and problems are presented in a new way, and that the children are required to interpret the thought from the printed page without the assistance of the teacher's voice, gives an opportunity for growth in independence.

K. W.

PHYSICAL EDUCATION

Each pupil is examined carefully by a physician connected with the Department of Physical Education. Tests of sight, hearing, nervous control, and the muscular system are made, and the condition of the throat and nasal passages, of the heart and lungs, and of the spine and feet, is determined. A report of this examination is sent to the parents and to the classroom teacher. The latter finds the information very valuable, for it enables her to so arrange her daily program that the physical side of the work may receive prominence. This information leads the teacher to be just in her requirements, careful in the selection of seats for those who need consideration in the matter of sight and hearing, and judicious in her general treatment of the children. Where simple corrective exercises are needed, she may plan to present them in the room. When more serious defects exist, scientific treatment is given by a specialist in corrective gymnastics.

Because little children become easily fatigued, frequent periods for relaxation and free play are provided in the daily program for the classroom. When one set of muscles has been in use for a time, exercises demanding the use of another set are given. Furthermore, much of the regular school work tends to develop and control the larger muscles; for example, planing, sawing, and hammering in manual training, dramatizing in reading, singing, and large free movements in art work.

Each class spends twenty minutes every day in the gymnasium under the direction of a special teacher. The general nature of this work is indicated by the following outline:

Marching.
- Alternating right and left.
- Marching in twos and fours.
- Diagonally across the room—crossing in the center.
- Forward and backward in floor formation.
- In different positions:
  - On toes.
  - On heels.

Raising knees.
Raising heels.
With knees bent.
Skipping.
Forward.
Side-skip.
Maize.
Running.
In place.
Forward.
Maize.

Dancing.
Simple steps:
Side step.
Touch step.
Step and hop.
Heel and toe.
Galop step.

Combinations:
Four slides with right foot, four with left, eight walking steps around partner.
Heel and toe step, first with right foot, then with left, followed by four slides with right foot forward, four with left.
Galop step combined with hopping step to make a simple circle dance.

Floor Work.
Definite.
Response to command:
Attention.
Hands on hips.
Feet close.
Feet open.
Feet sideways.
One step in any direction.

Indefinite.
General classification:
1. Exercises using chiefly arms and legs.

2. Trunk movements.
3. Jumps.

1. Arm and leg movements.
   Clapping hands overhead with heel raising.
   Arm raising sideways with heel raising.
   Windmill.
      Arm circumduction in time to music (fast or slow).
   See-saw.
   In rows of two—joining hands, each row alternate in knee bending.
2. Trunk movements.
   From standing position.
      Clapping hands overhead and behind both knees.
      Alternate knee upward bending.
      "Frog" position (hands on floor—arms between knees).

   From stride position:
      Chopping movement.
      Rowing.
      Clapping hands overhead and behind alternate knee.
      With hands on hips, forward bending, touch floor, and return.
      Same, bending sideways, one hand touches floor, one on hips.
      Arm extension alternating with forward bending.
      With arms overhead, alternate sideways (trees in wind).
3. Jumps:
   Jumping, separating feet sideways.
   Jumping, up and down on both feet.
   Running in place.

Apparatus Work.
   Hand apparatus:
      Musical dumb-bells.

All of the indefinite work previously given.

Balls:

Bouncing from right hand
" " left "
Tossing " right "
" " left "
} Catching in both.

Slow march, bouncing with each step.

Heavy apparatus.

Jump standards:

Plain running jump, without regard to form in landing.

Stall-bars.

Hanging:

Raising heels.

Separating feet sideways.

"About face" hanging.

Separating feet wideways.

Horizontal ladder.

Hand traveling sideways.

Traveling forward on the rungs (without regard to form).

Ropes:

Swinging.

Climbing.

Boom.

Side traveling (without regard to form).

Giant stride.

Galop step sideways.

Games:

Clap.

Beater goes Round.

Hare and Hound.

Games with beanbags:

Passing down four lines.

Passing around circle, six bags going at same time.

Throwing back and forth across two lines, four lines racing.

Two circles, each child throwing bag into

basket in center; side wins that gets most in basket.

Games with basketball:

Two circles, one child in center of each, tosses to each in turn; side through first wins.

Throwing back and forth down each two lines, four lines racing.

Circle, one child in center tries to roll ball between feet of those on outside; children on circle try to keep ball away from the center.

Circle, one child in the center tries to keep out of the way of the ball.

Follow the Leader.

Crossing the Brook.

Stepping from mat to mat, any child touching the floor between the mats gets his feet wet and must go home.

H. N.

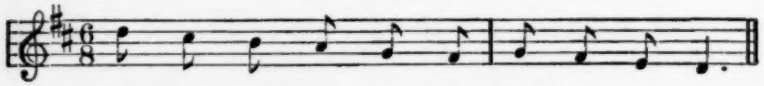
"In the pleasant August night,
When the stars are shining bright,
While the evening dews are falling,
Hark, a little voice is calling,
'Katy-did, Katy-did,
Katy-did, Katy-did.'"

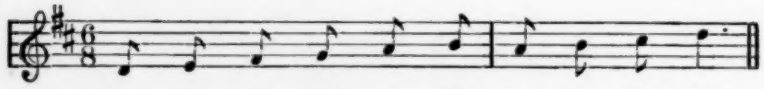
The "Katy-did" song to Mrs. Knowlton's tune illustrates the kind of subjects selected for the fall work in music. Its clever refrain stimulates the imagination of the little singers by calling up country associations not yet forgotten in the excitement of the return to school life. In the same way *Falling Leaves*, Neidlinger; *Nature's Good-By*, Hill; *Harvest Song*, Smith, carry on the fall and Thanksgiving thought. A little later, *Jack Frost*, Neidlinger; *Snowflake*, Gaynor; *Christmas at the Door*, Smith; *Away in a Manger*, Hofer; *Christmas Carols*, Gaynor; and *January*, Knowlton, utilize the Christmas and winter sentiment for much of the song material.

With the approach of Washington's and Lincoln's birthdays the patriotic songs are made prominent. *For Peace and for Plenty*, Knowlton, proves a great favorite as well as the *Flag Song*, Gaynor, while with the first promise of spring, *Pussy Willow*, Gaynor, and *What Robin Told*, and *Dandelion*, Knowlton, bring the spring anticipations into the work. Later the *Caterpillar*, Neidlinger, and the *Song of the Shearers*, Gaynor, naturally follow.

But beside the seasonal idea a second fruitful theme for song work is suggested by the study of primitive industries in which the children of this year are interested. This material comes almost entirely from old folk songs and games such as the Swedish weaving game or dance, and the spinning and weaving songs with imitative activities like passing the shuttle or turning the wheel, and the acting and dancing prove a great help in the rhythmic work. From the shepherd's life come many beautiful pastoral songs, as *Hare and Hounds, Run, Sheep, Run*, and the more modern *Song of the Wool*, Miss Hill, and *Spin, Lassie, Spin*, Reinicke.

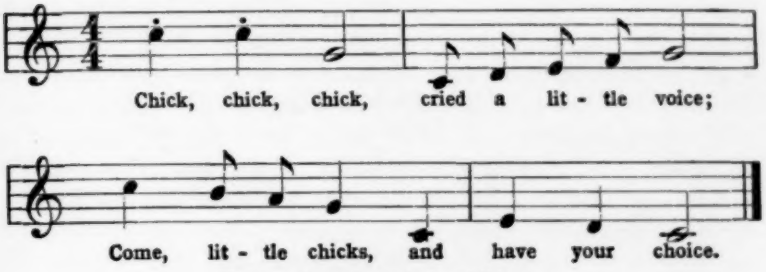
In addition to songs with the acting and primitive dancing that accompany some of them, the children carry on a second kind of work, where the song thought is reduced to its simplest form. This work taxes not so much the singing ability of the child as his power to think and to analyze. Such little scale songs as *Down Come the Autumn Leaves Whirling Around* and its complement *Up Goes My Pretty Kite in the Blue Sky* suggest that the tune must have some relation to the words.





In tracing this general thought the children begin to observe what it is that gives the characteristic expression to the tune, whether it is the way in which the accent falls, or the grouping, or the length of the notes, or whether it is that some are high and others are low. The pupils first express their observations by actions, then later, picture the movement on the blackboard, so as to show to the eye the correctness of their observations.

Parallel with the imitative work of the song, and the analysis work of the song-sentence, a third phase of musical training is carried on. This is practise in making tunes, first of appropriate words for a song and later of tunes that express the sentiment or action of the words.



Tune and words made by children.

Finally toward the latter part of the year this picture notation of their songs will be replaced by the first steps in regular notation.

Thus there are three distinct lines of work: first the singing of songs a part of every lesson though emphasized more in some than in others; second the training in musical observation with special reference to the character of the individual tones in the melodies, emphasized at least in one lesson a week; and third the development of musical feeling through attempts at song making, coming at favorable opportunities when the class is ready for it.

We will attempt to show briefly how this work is done. Take for example Neidlinger's song *Tick-Tock*. A few questions are sufficient to freshen the pupils' minds in regard to their experience with time-keepers from the large hall clock to the tiny watch. Then the song will be sung for them. They will be asked to notice whether the tune tells the same story that the words do. Though there will be volunteers at once, the song will probably need to be sung again. Almost every child in the room will then be ready. One will say that the melody "goes way up" when the big tall clock is mentioned, another that "its tick-tock goes slow," while still another will suggest that "mamma's clock ticks twice as fast, and papa's little watch ticks faster still." Then the children try to sing the song. They must show by their strong, steady tones that they are singing about the big, stately grandfather clock, by lighter, daintier ones that mamma's French clock is meant, while the tones must fairly dance with jollity with the lively pace of papa's watch. But this is not accomplished at once. To get the big sustained tone there must be good position of the body, good control of

the breath, the vowel on which the tone is sung must be kept pure and steady, while the mouth and the end of the tongue must be alive and vital to articulate crisply the performance of the watch. Not only are different parts of the song compared with one another so that each part shall be rendered according to what it expresses but previous songs are reviewed and compared. It will be observed that the song work instead of being hilarious shouting for the sake of the physical thrill connected with rhythm and making a noise, or a meaningless drawl of words, is a highly expressive exercise requiring close concentration.

Turning now to the analysis of the song sentence it will be seen that this work requires that the attention be focussed on the individual tones of a melody. It is necessary to note what relation the accented tones have to the unaccented, the short tones to the long, the direction and general distance of the high tones from the low. All this work is done with complete musical passages or phrases, some of them not longer than two or three notes, but still forming a musical movement or motif. Thus the work does not degenerate into learning the technicalities of music without being able to associate these technicalities with their proper place in living music. Take for instance the most fundamental observation with reference to music, that we can walk or make a regular movement in exact time with music, and that in such a movement a stress occurs; we try to have the pupils discover this for themselves and show by their movement that they really understand by marking time with their feet, showing by slight stress on the left foot the accented note. They afterwards show this movement by making circles with the hands, large ones for the accented pulses and small ones to show the regular divisions of the time that occur between. This work commenced in the first grade is easily done in the second and leads to the picture work where the pupils go to the board and while they sing the song themselves, or while the class sings it for them, make large and small circles that will fit the swing of the song. When this is done a vertical line is drawn before each large circle, thus dividing the space into measures containing one large and one or two small circles. This is done not only in connection with the song and the song sentence but with *Mother Goose* jingles, like " Jack and Jill " and " Old Mother

Hubbard." The pupils discover that to picture these songs adequately each circle seems to stand for two tones in the first, while in the second each circle stands for three, while if they sing "Ding-dong Bell, Pussy's in the Well" they have three kinds of duration. One with the circle, which they learn as the medium length, one occupying the length of two circles which at present they call a long tone, and with the words "Pussy's in the Well" they find that two tones come for each circle, called short. The pupils clap these tones while the teacher makes the circles, or half of the class makes the circles while the other half clap, then change about, until the difference between the regular metrical element in the lines and the irregular duration element of the words is clearly appreciated. Then the pupils go to the board and place dashes over the circles and between the vertical lines, showing to the eye how the various duration lengths fit the circles that picture the metre. See illustrations, page 61.

This gives a complete rhythmic picture of either a line of poetry or phrase from a song. The pupils enjoy going to the board and making pictures of tunes with which all are familiar and the class guesses what song is pictured. Sometimes each child makes a rhythm picture of a well-known couplet, thus showing individual accuracy of observation and performance. The pupils correct each other's exercises at the board. In the latter part of the year the dashes over the circles have the regular notes placed upon them, a quarter note placed over the circle that breaks into two tones, and a dotted quarter over the circles that represent such tunes as "Old Mother Hubbard" or "Dickery Dickery, Dock." The quick notes that make up the circles are represented by eighths while the long notes covering two circles are represented by half notes. When the significance of this notation is clearly appreciated the notation is used without the pictures, and the pupils discover the necessity for something at the beginning to state how many pulses are to be grouped together into a measure and whether the pulse is to be represented by a tone that breaks squarely into two like the quarter, or into three like the dotted quarter, and they learn to represent the difference by using the eighth for the latter and the quarter for the former. Thus the function of the fractional numbers at the beginning of a piece of music, as well as their necessity, is discovered. See illustrations, page 61.

The third observation in connection with tones is to discover whether they are high or low. The pupils first indicate their observations by raising and lowering their hands while singing a little phrase, or the teacher sings while the pupil tells by the movement of his hand not only the direction of the voice but approximately its distance from the last tone. When a close connection has been made between pitch movement and physical movement the same thing is expressed at the blackboard by placing dashes high or low. Thus a fairly accurate picture of the change is presented to the eye. The pupils are not only eager to put down songs and let the class guess what they have in mind, but they are quick to correct the mistakes and observations that are made.

When the feeling for pitch difference has been definitely associated with its representation on the board, lines are introduced in order to mark the differences more accurately. First a song with two consecutive tones, back and forth, is taken and it is found that if the first tone is represented by a line the tone above it can be put next to it on a space, and when a song goes up three tones another line is added. So, in the process of defining song sentences on the blackboard, a group of five lines is developed, and in the latter part of the year considerable skill is shown in following the teacher's pointing up and down on this group of lines and spaces. The children also learn that when *doh* is on a line *me* and *soh* come on lines; and when *doh* is on a space *me* and *soh* come on spaces above it. Thus the first step is made towards grouping in thirds.

In the third kind of work already alluded to, that of song making, some subject connected either with seasonal occupation or the pets that interest the class is suggested to the pupils. Some characteristics of these subjects are dwelt upon, such as the howling of the wind or the movement of the water or some mood, as gay or regretful. After the imagination has been stimulated a couplet is attempted, something that will put into rhythmical shape what has been talked about. There is never any lack of suggestion along this line, and the effectiveness of previous rhythmical observation is seen by the way the children discover the weak spots in each other's productions or give at once a complete form to their thoughts. The following is a couplet offered by one of the children in a recent lesson:

There was a little bluebird
Sitting on a tree,
When I saw her little ones
She flew away from me.

The pupils and teacher join in selecting what they consider the most effective for musical setting, giving their reasons for their choice. Then probably at some other lesson the lines are taken up for musical setting. While reminiscent phrases of previous songs are likely to occur, the effort at making the melody express the thought of the words in hand makes a very stimulating exercise and brings into play the whole field of musical activity of the two previous divisions of the work.

The description of what is done and how it is done may now be supplemented by giving a few reasons as to why it is done. A close connection is made between the songs and the child's daily experience, because the pupil cannot be interested in a song whose words he only partially understands; in fact there are many such songs that it is wise for him to learn, like patriotic songs, hymns, and classic songs which are constantly being sung at church and at public gatherings. It is well to learn these as gems in poetry are learned, their full significance not being felt until later, but the real reason for the selection of songs as previously outlined is that we make the work expressive, significant, when we thus relate it directly to the child's immediate interests. The music lesson, then, is not a semi-recreation period wherein the mind goes to sleep while feeling runs riot. It is rather a period where thought and feeling are combined, one whose educational value is second to none that occupies school time. Everything done—the attitude of the body, the deep breath, the good articulation, the sustained tone, the intelligent rendering of the melody—all grow from one purpose, the adequate expression of thought. The benefit of such training is not that the children learn to sing a few songs well, but that their minds are awakened to the reasonableness and common sense that underlie not only music but all artistic expression. Music is thus put in the same category as language work, nature study, and manual training.

So in the second kind of work done, that of observing the stress duration and pitch characteristics of tone. However

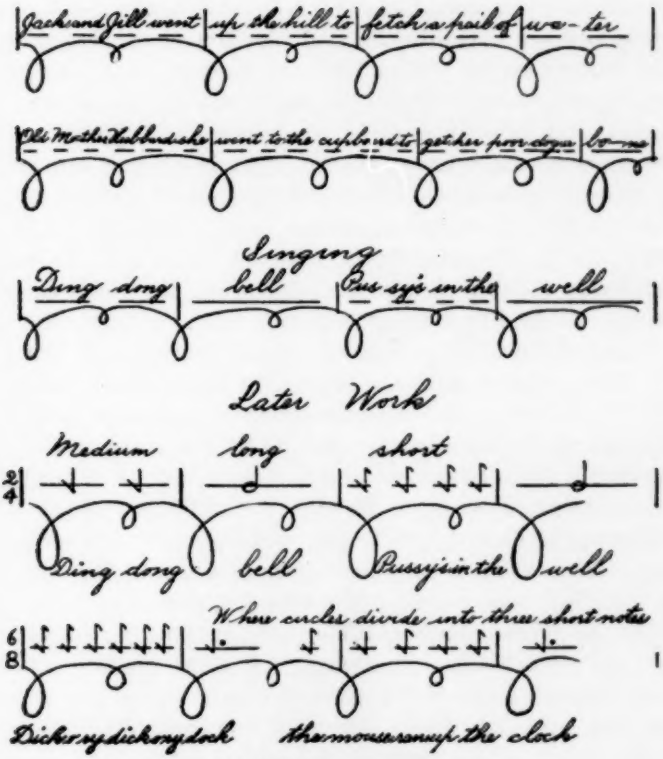
valuable this may be as a basis for learning notation it could hardly be justified from that point of view only, for few of the thousands who spend time in learning notation in school ever practically use this knowledge. Those who do can learn it much more effectively in connection with their instruments. The reason for this careful observing, then acting and picturing what has been observed, is for the mental intelligence with reference to tone that it awakens, making the future enjoyment of artistic music more keen.

The hearing of many persons, perhaps of the larger portion, with reference to modern music is like the sight of one who has thin cataracts over his eyes. The general distinction between light and shade, of bright spots and dark spots, is felt, but all those nice discriminations that are necessary to make a picture enjoyable are lost, not because of lack of æsthetic appreciation but from inability to appreciate the form of what is presented. The essential thing for such a person is to remove the cataract so that he can see clearly. So with the ability to enjoy modern musical works. It is essential to hear accurately enough to appreciate the form (not using the word in its technical sense) in which they are presented. This accurate observation of differences in tone does for the tonally dull child, if begun at a sufficiently early age, what the removing of a cataract does for a grown person who has partially lost his sight. The aim of this work, then, is the development of a deeper artistic appreciation.

The third phase of work, that of song making, might at first sight seem unnecessary for the average child, but it is for just such that the work proves most valuable. It is the average child that is apt to take his music simply on its physical and sensuous side, failing to make the connection with his artistic nature. Such a child in the attempt to compose words and music that are appropriate will get an insight into the real nature of song more true than he could get in any other way, even though his own work has no artistic value.

Thus the aim of the year's work is not to gain technical efficiency, intellectual knowledge, or even vocal skill, but to train the pupil's heart and mind for the most complete enjoyment of music that is possible to him.

H. L.


Jack and Gill went up the hill to fetch a pail of wa-ter
Old Mother Hubbard she went to the cupboard to get her poor dog a bo-ne
Singing
Ding dong bell Pus-sy's in the well
Later Work
Medium long short
Ding dong bell Pussy's in the well
When circles divide into three short notes
Dickory dickory dock the mouse ran up the clock

Illustrations, see page 57.

THIRD GRADE

READING AND LITERATURE

When children have reached the third year of school, they have overcome many of the difficulties with the mechanics of reading and are beginning to find pleasure in reading to themselves and to others. This habit of reading is encouraged by providing them with good literature which appeals to their interests and is within their comprehension. Given a good literary form, the interest to the child is of first importance. This interest is best held by the "long story," or by a series of stories in which the same characters appear, as in Abbie Farwell Brown's *In the Days of Giants*. We do not seek easy reading. A child who is plunged into an interesting tale reads on in his eagerness to find out what happens next. Correlation with other subjects in the course of study is of secondary importance. When this is carried to an extreme, it results in inferior literature.

We have been guided in our selection of material by the above considerations. *Hiawatha* appeals to the majority of the class, because it is full of the lore of the Indians, and the rhythm of the lines seems to swing them over the difficult words. Then, too, they experience here the joy which many an older person feels in discovering a familiar poem in a book, for parts of *Hiawatha* have been memorized in the first grade.

Alice in Wonderland and *Through the Looking Glass* are a delight to both teacher and pupil. A child reading *Alice* by himself sometimes finds the sheer nonsense "silly," but this is rarely true when he laughs over it in company with his mates. Even in this day of freedom in the classroom and good comradeship with the teacher, a hearty laugh is only too rare. *Alice* furnishes occasion for many, and also for spontaneous dramatizing dear to the heart of a child.

Children glory in the larger things of life, in the forces of nature, in big happenings on sea or land. Two books read in this grade feed this healthy love of adventure and lead the way to Scott and Stevenson. These books are Cook's *Story of Ulysses* and Brown's *In the Days of Giants*.

Other books which may or may not be read according to the abilities and interests of the class are Holbrook's *Nature Myths*, Morley's *Bee People*, Brown's *Book of Saints and Friendly Beasts*, Andersen's *Fairy Tales*, and Eggleston's *Stories of American Life and Adventure.*

Many poems are read and memorized, certain ones being chosen from Burt's *Poems Every Child Should Know*, while others are selected by the teacher from various sources and placed in portfolios owned by the children. Some of these poems, like *The Coast Guard*, are directly correlated with other work, but most of them are chosen only for their literary beauty and interest for the child.

Besides the books which the pupils read for themselves, they are introduced to many others by the teacher's reading, the object being not only to enlarge their field of literature, but also to lead them to read for themselves at home. They are encouraged to bring Christmas and birthday books from home, and selections from these are read, just enough to rouse the interest. As a result the books are eagerly read before school and are usually, in time, added to the home library. Some of the books used in this way are *Hans Brinker, or The Silver Skates*, Dodge; *Jungle Books*, Kipling; *The Magic Forest*, White; *Arabian Nights*, and *Out of the Northland*, Baker. The legends of the Hudson are told to them in connection with their home geography and they listen with delight to Irving's tales of Rip van Winkle and Ichabod Crane. Later in the school course, they will read these for themselves.

No time is taken from the reading in developing difficult words, in the so-called preparation for the lesson. Rarely is there a word which the child cannot get from the context, and an unfamiliar word can be pronounced for him and briefly commented upon in passing. We are finding out what happens next to our hero and the discussion of words is a waste of time. The study of words has a place, but that place is not in the literature lesson, where it is sure to detract from the interest of the story. Certain words are chosen from the reading and studied in a language lesson. They are written on the blackboard for recognition, pronounced phonetically, spelled by syllables, and used in sentences formulated by the children. In this way their vocabulary is consciously enlarged. Individual

dictionaries of these words add to the interest, and the children vie with each other in their lists of words. The following are examples of the way these words have been incorporated into sentences by the children: The Palisades are *rugged cliffs* rising out of the Hudson River. We looked through *interlacing boughs* into the blue sky. Loki *chuckled* at the thought of the mischief he had done.

There is then no study of words in the reading lesson. Sometimes a preliminary talk is necessary in order that the children may feel the atmosphere of the story, but the less analysis the better. Beyond this the treatment varies with the selection. When a beautiful piece of literature is to be given to the children, like Wordsworth's *Daffodils* for instance, it seems best that the pupils should not make a blundering first rendering of it, but that it should be presented as a whole in a finished way by the teacher.

So, in almost every reading lesson, there are certain paragraphs which may well be read by her. There is little danger of their becoming mere imitators. In other selections we call to mind that reading is thought-getting, so the story is read silently by the children and reproduced in their own words. In *Alice* the fun of the conversation would be lost if transferred to the child's words, so the text is read at sight. Afterwards, the retelling takes the form of dramatic action. The "Mad Tea-Party" is a favorite subject for dramatizing. Chairs are placed at the classroom table, and the Hatter and March Hare seat themselves with the Dormouse uncomfortably asleep between them. As Alice approaches, the chorus of "No room, no room!" is met with an indignant "There 's plenty of room!" Whereupon she seats herself and the conversation proceeds. No rehearsing is necessary, for if the Hatter forgets his part there are volunteer prompters in the audience. Stage "properties" are unnecessary, for our imaginations are vivid, although it has been suggested that "just for once" we might pour water on the nose of the sleepy Dormouse to make as realistic as possible the "hot tea" of the story.

On the other hand, in Brown's *In the Days of the Giants* and Cook's *Story of Ulysses* much time may profitably be given to silent reading. As far as possible the story as a whole is presented to the children. The chopping-up into small

sections to be told to classmates who already know the story would be irritating to a grown person and is surely so to a child. In order that there may be some freshness in the telling, two or three pupils are sent from the room. Their classmates read the story and are then able to tell it with enthusiasm to those who have not heard it. In the telling the child, of course, is allowed perfect freedom in the choice of words, but the frequent question "How does the author say this?" calls his attention to the better form, and he unconsciously learns to strive for this. Criticism of each other, when not carried too far, is permissable, although any criticism which makes the storyteller conscious and stilted in his use of words is pernicious. The children must feel that they are to tell what happened and an undue use of *ands*, *nows*, etc., and a foolish repetition of the thought spoils the story. In the preceding grades the children have been trained in the discussion of a story to see the more important event. This has been aided by questions and by illustrations on the blackboard. Both these devices are helpful in the third grade, but as an additional step, a simple outline may be written on the blackboard and used as a guide in the telling of the story. Later in the year the children themselves may make the outline.

Questioning is an art, and an art which should not be overworked in the reading lesson. It is easy to make commonplace a beautiful piece of prose or poetry by the quantity or quality of the questioning. If there are unfamiliar words which obscure the meaning, these are made clear, but children are impatient, and rightly so, of too long delays. It is well to make the story a part of their own experience. The story of Thor's duel is opened by a detailed account of the "wonderful race of horses pastured in the meadows of heaven." The question "Where have you seen beautiful horses?" calls forth enthusiastic accounts of the circus, the stock-farm, the horses in Central Park, and their own ponies in the country. This is not going too far afield, for they turn to the book and read with fresh enthusiasm of "Hrimfaxi who drew the chariot of Night and scattered dew from his foaming bit" and of "Glad, whose mane was yellow with gold and behind whose flying heels sped the swift chariot of Day."

As to the ethics of the story, there is always danger of moralizing. The children are very glib in formulating maxims

of which they think their elders will approve, but there are innumerable incidents in the classroom and on the playground which give the watchful teacher opportunity to make tactful "application" of the stories read.

In the oral reading which follows the silent getting of thought, most children having a clear picture of what has happened will read naturally and therefore with expression. When the children read aloud, it seems natural that they should face those to whom they are reading. It has been suggested that we force them into an artificial position when we allow one child to read to his mates while they are apparently absorbed in the printed page,—that the natural thing is to have all listen with closed books. This hardly seems desirable with young children. The boy is still full of the joy of mastering the mechanics of reading, and he is surely aided in this by the careful following of the words as his classmates read. There are always certain pupils who listen with absorbed attention, regardless of the book. Such pupils are not chided for "losing the place."

The selection is often reviewed and practice given in oral reading by the direction, "Read to the class the part you like best." Frequently a child chooses a sentence or a stanza which appeals to him because of its poetic beauty, although he has not analyzed it as such. Often it is the mere bravado of words which allows him to assert his boy-nature within the walls of the classroom. This accounts for the favor shown the following paragraph, "'Do to him!' growled Geirrōd fiercely, 'G-r-r! I would chew him all up! I would smash him into jelly!'" Again, they are attracted by the sentiment, as, "Ulysses stooped to stroke the head of the only friend that knew him, and the poor dog, striving to lick the hand of his master, stretched himself out and died of joy."

In this year's work, the apparent gain in reading may not be as great as in preceding years, but the pupils have definitely formed a habit of reading, so that they voluntarily read at home. They have learned that they can give pleasure by this reading aloud, and feel that they are active members of the home circle. Their tastes have been so directed that they are on the high-road toward making a conscious distinction between good and poor literature.

M. I. B.

LANGUAGE

We sometimes wonder how much of the formal English taught in our early grades of school is of real value in later years. How many of our good conversationists, for instance, can trace any of their power in this line to the early work in language in our schools? How many of our best writers,—I will not say of fiction, for good story-tellers are born and not made,—how many orators, lawyers, public speakers, can trace their literary style, even their habits of using correct English, of punctuating correctly, to the language lessons which they learned in school? It would be highly interesting and valuable if we could estimate this. It would doubtless prove a shock to those of us who have been faithfully giving thirty minutes a day to formal work in language. Until recently most schools placed the emphasis upon form in both oral and written language at the expense of thought, imagination, and interest. Now it is realized that the child is probably unconsciously learning more every day about form from the books he reads, from the conversation he hears about him at home and in his play, perhaps from the street-car advertisements he reads on the way to school in the morning, than he learns in a day or a week of cut and dried language lessons in school. This does not indicate that the subject of language should be abolished from our school curriculum, but it does suggest that the most effective method of teaching it is the one which follows as closely as possible the one the child is constantly using in spite of us.

Not long ago a teacher in a primary room was struggling to have well retold one of the stories of Ulysses' wanderings. There was little incentive to the story-teller, as the other children had read the story and the teacher knew it by heart. The child had drifted into a dreamy style of narrative and was urged to put more life into the tale. He looked surprised and injured. He asked the teacher if she had read the *Iliad*. Upon being told that she had, he explained that it had been read to him at home, that he liked it better than the story that was being read in class, and that he was trying to make his story sound more like

the *Iliad*. The child, in this case, had chosen a high standard for imitation.

We aim, from the earliest years of school, to give children the best in literature, both in the books they read and in the poems they memorize. We may trust to that to do the lion's share of the work in language, for intimacy with good literature develops appreciation of style, fosters imagination, and tends to easy and correct expression. This does not imply that reading, and reading alone, will accomplish the end in view. On the contrary, the models thus presented must be consciously and carefully studied, they must be copied, they must form an incentive for original work, and they must supply a basis for comparison with the child's own constructive effort.

Little time is given to the formal teaching of the use of commas, quotation marks, etc., in the third grade. It is thought that the children will in time through constant, correct association, learn to use these marks correctly. Most of the written work until the latter part of the year is imitation work, in order to avoid forming bad habits of punctuation and spelling, which invariably result from original written stories. Sometimes a short story, fable, or anecdote is written upon the board. Attention is called to any punctuation with which the children are unfamiliar, or to the spelling of a difficult word. The story is erased and the children are asked to write it. Sometimes the teacher writes upon the board a story chosen by the class. Sentences are suggested by volunteers, while the other members of the class become critics. If a sentence is too long or poorly worded, it is rejected. Again a poem is selected which the children have previously read in the literature class. A poem is usually better for this purpose than a prose selection, for the reason that the child grasps the thought more readily and is not confused by the long sentence. Take, for example, the first stanza of Celia Thaxter's *The Sandpiper*. The children are asked to tap lightly on their desks, indicating the rhythm. They are thus enabled to see what constitutes a line, and will not in written reproduction use too many words. They are asked to glance at the first line. They then close their books and one is chosen to write the line on the blackboard. The child selected is one of whom the teacher feels comparatively sure, in order that those who are watching so critically and comparing

this work with the correct form may see no error. The instant a mistake occurs it is corrected by some volunteer. A child is asked not to attempt to spell a word unless he is sure of it. The other lines of the stanzas are reproduced in the same way. Occasionally a rule creeps in. A child starts to write his line of poetry with a small letter. Some one is asked to make up a rule which can always be used in such a case. The rule, to be understood by the one for whom it is coined, must be clear and concise.

Exercises involving the changing of sentences so that the same thought is expressed in different ways, and those requiring practice in changing statements into questions and vice-versa, help the child to gain facility in the use of language and give an opportunity for drill in punctuation. Later in the year, when the children write short letters to some absent friend, a letter form is placed upon the board for a copy. Attention is called to the position of the opening and closing, and the reason for the accepted forms is explained. Then the children copy the letter carefully. This model they keep before them in their later work until the form becomes familiar and they can give more undivided attention to the contents of the letter.

The dramatization of stories tends to strengthen both the oral and written language work. A section of the class is frequently chosen to act some story while the rest of the children try to recognize it. Then the story is written. There is great value too in letting the oral expression precede the written.

Our school paper is a great inspiration even in our primary grades. Toward the end of the third year short stories, original poems, and puzzles are given to the editors. The following were printed this year:

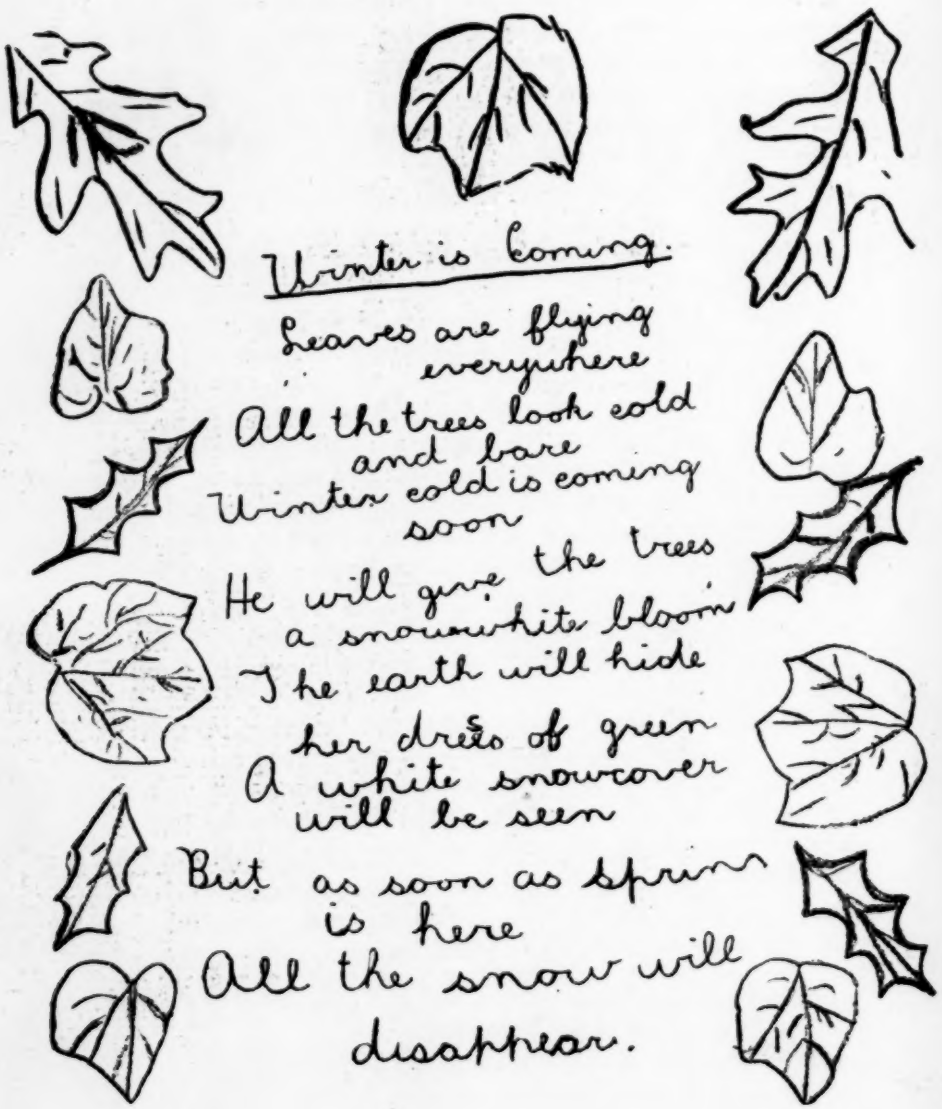
Wilhelmina

My very best doll has lost her wig, so I cannot tell you about her this time, as she is not presentable.

But I am going to tell you about my little Dutch doll.

One day when my grandma was in Amsterdam she saw a doll dressed as the orphans are in that city, so brought it home to me.

The dress is black and red; she has a white 'kerchief and a


Winter is Coming.
Leaves are flying everywhere
All the trees look cold and bare
Winter cold is coming soon
He will give the trees a snowwhite bloom
The earth will hide her dress of green
A white snowcover will be seen
But as soon as Spring is here
All the snow will disappear.

little black apron, a string of red beads around her neck, and a lace cap pinned with two little gold pins. She has brown eyes and all together is a jolly-looking little orphan. I have named her Wilhelmina after the queen of the Netherlands.

Wilhelmina was not seasick on her trip over, and when she arrived I was very glad to see her. And although she is a little orphan she is never lonely, for I take good care of her and pretend I am her mother.

The children of Grade III are encouraged to do a great deal of original oral work. Every opportunity is given them to talk of things which greatly interest them. They are not hampered by criticism. They are not interrupted so long as they have something interesting to say and the others wish to hear it. Often we form a ring, sometimes sitting upon the floor, and one child after another talks to us. He may tell of his day at the circus, of his pet dog, or of the tricks of some of his other pets. He is not self-conscious, his face is a perfect picture of delight. He doubtless feels as great a responsibility in entertaining his listeners as does the after-dinner speaker. Another child tries to match this tale with something he has read, or heard, or dreamed. It little matters what his story is. If it is something that the child knows about, loves, and wants to tell, his mates will be interested.

Frequently a group of children is sent from the room while a short story is read to the class. When the children return some member of the class must tell them the story. Then the class is critical. The story-teller leaves out one of the most exciting parts, or he uses too many words, or he does n't make the wolf seem savage enough.

We aim to keep continually before the child the best things that have been written. This we do because the imitative nature of the child tends to make a model of whatever is put into his hands, and we are defeating our own ends if we do not give him something to stimulate his imagination, prove an incentive, and lead him into good habits of writing and into correct spelling and punctuation. We use these models first as copies and later as the means of testing original work. We are careful not to write too much, and not to write without

adequate preparation, in order that we may avoid careless and incorrect habits. We give definite exercises which tend to increase the vocabulary and to give ease and variety of expression. We emphasize the value of freedom and originality in oral expression and of graphic and picturesque narrative.

M. H. L.

SPELLING

Spelling has received the attention of educational experts throughout the country. Numerous methods have been at one time heartily indorsed, and again at the introduction of a new method just as heartily condemned. The conflicting advice received by teachers runs as follows: Emphasize oral spelling; spend most of the time on written spelling; always have the words placed in sentences; give the child long lists of common words; follow closely the —— spelling-book; abolish the text-book absolutely; use phonetics in the teaching of spelling; the best results are attained through sight spelling; etc. Just as one reaches the conclusion that the judicious use of all these methods combined is wise, Dr. J. M. Rice comes forward with the announcement that "There is no direct relation between method and results."

Again we are told, by experts who have made most careful experiments along this line, that we may just as well omit the formal teaching of spelling from the curriculum. From certain statistics, they seem to be able to prove conclusively that the results from a given school, after three years of no instruction in spelling, are just as good as those in another school, under almost exactly similar conditions, where a thirty minute period has been daily given to this subject.

It is probably true, however, that much of our poor spelling is due to careless habits in the observation of words. We believe that much may be accomplished through word study, through the formation of the habit of noticing similarities and differences, and through conscious imitation of the correct form. Early this year, during the few minutes allotted to games, "Dumb Cranbo" was played. It at once became our favorite game. After playing it once or twice, it was not difficult to discover that it had distinct value as a spelling lesson. Although this is an old game, I describe it here for the sake of illustrating how it has helped our spelling. Four children are sent from the room. The class then decides upon some word suggested by any volunteer. It must be a word which has other words rhyming with it, which are spelled similarly. The first words suggested were

apt to be simple, such as ill, fill, skill, or shake, make, wake. Two children who spell correctly are sent to the board to write the words suggested as the game goes on. When the four children return, they are told that the word which they are to guess "rhymes with the word written on the board, and is spelled like it." This word may be "right." The four children withdraw for consultation. In a moment they return and act the word "knight." Two of the children are prancing horses and the other two are brave knights. A tournament is about to ensue, when the children at the seats cry out, "No, it is not 'knight.'" This word is then written under "right" and the game goes on. The next word acted may be "plight" or "sight" or it is more apt to be "fight". Unless the dramatization is good, indicating that the meaning of the word is understood, the word is not recognized. When the right word, "tight," is acted there is great applause.

Frequently a word is acted which rhymes but is spelled differently, as "kite." Some child writes it upon the board to show that the spelling is quite different. Ordinarily the simple phonetic word should precede the more difficult one, but the charm of the game lies in the fact that management is handed over to the children and there is little interference on the part of the teacher. Later the children are encouraged to use words that rhyme regardless of spelling, and frequently three columns are written during the game.

steak	make	ache
break	bake	

At the close of the game the children are given strips of paper and asked to write as many of the words as they can remember. "Dumb Cranbo" lists of words are brought in before school in the morning. A word is never chosen from a list in which there is a mistake in spelling. Great care is, therefore, used in preparing the lists. Words that do not make good "Dumb Cranbo" words—such as dough, tough, through—are discarded, but not until the similarity in spelling and difference in sound have been detected. New words are constantly being added to the child's fast-growing vocabulary. Two-syllable words are introduced, such as pocket, socket, locket, or mingle, shingle, tingle. The meaning of words is brought out by the dramatization.

It is commonly thought that children do not often enough associate words with objects. To meet this difficulty a small table is arranged with ten common school objects on it, such as a pencil, a book, a piece of chalk, a tiny plant. This table is hidden in one corner of the room behind the desk. The children of one row are allowed to run behind the desk, peep at the objects for an instant, and then write the names of as many as they can remember. A correct list is then written upon the board. Often a printed list of common words is given to each child. Instead of being asked to "study the words ten minutes" the children are asked such questions as these: "Is the first word spelled as it sounds? What is the silent letter? What two letters in the next word sound like 'er' in her? In the third word what two words do you find?" etc. The class is asked to glance at the first five words for an instant. Then a child is chosen to stand before the class and spell the words as the other children pronounce them in concert. The enunciation must be very clear. The pupils, watching intently for any mistake, are unconsciously studying carefully each word as the child spells. After several have spelled orally the children close their books and write either on the board or on paper as many of the words as they remember.

Preceding a reading lesson, the children are often asked to copy all of the two-syllable words in the lesson. They are also asked to make certain words longer by adding a syllable. They select the words ending in "tion" and "sion" and group them.

Correct enunciation is of the greatest aid in teaching spelling. Many children spell words incorrectly because of shiftless habits of pronouncing them. The best means of guarding against poor spelling is to give children little opportunity to spell incorrectly. We often find children, even in very low grades, encouraged to write freely on some subject which calls for a vocabulary the spelling of which is beyond them. As a remedy for the resulting poor spelling, the papers are often corrected in red ink and handed back to be rewritten, thus calling attention to the mistakes made. Under such training, in two weeks' time the child probably stands less chance of spelling the words correctly than he did before he was asked to write originally.

As long as children are taught to read and write, they will be taught in some way to spell. It little matters what the method is, if there is thought and force back of it.

M. H. L.

ARITHMETIC

In discussing the arithmetic of the third grade we need to bear in mind what ought to be accomplished in this school year. Shall we guarantee that when a child enters the fourth grade he will have mastered the multiplication tables; that he will have acquired the power of accurately adding, subtracting, and multiplying numbers within a definite limit? This is impossible. The absolute mastery of mathematical processes depends upon years of experience and practice, and if attempted would mean a sacrifice of something more vital. On the other hand, if through the study of arithmetic we help to give a child power, the capacity to use his mind with accuracy and precision, good habits of attention and study, the ability to work with economy of time, and a fair knowledge of arithmetical combinations, we give him something distinctly worth while, even though when he enters the next grade, after our four months' vacation, he may have forgotten the result of 7 x 8. This may be our aim in other lines of work also, but there is, at this stage of education, no other subject in which habits of attention can be so definitely measured, both by the teacher and the child.

Children of eight or nine years of age come to us with a definite taste and desire for some of the more formal, abstract work of arithmetic, which is not so apparent in the earlier grades. Upon being given their choice one morning between going to the new gymnasium and remaining in the room to learn a new multiplication table, all but three out of a class of thirty chose the mental gymnastics. This is cited to show that much of the so-called "formal work," "systematic, mechanical drill," which sounds so formidable to an outsider, may bring much delight to one of our eight-year-old children, and that the mechanism of number may be secured with no sacrifice of interest.

A very definite line of work is laid out for Grade III, and certain definite results are accomplished. The details of our work are to some extent a repetition of those presented in Grade II. I will, therefore, indicate very briefly the ground covered by this grade, and then present rather informally one or two typical lessons

The following is the outline of work:

COUNTING.—The counting begun in Grade II is continued through 12's as a basis for the multiplication tables.

ADDITION.—Written: With numbers of four orders, including dollars and cents. "Carrying" involved.

SUBTRACTION.—This is begun in the making of change at the school store and continued in abstract examples of three and four orders. This is taught by the Austrian or addition method.

MULTIPLICATION.—The tables are completed. Written multiplication of numbers of two or three orders by numbers of one or two orders.

DIVISION.—Oral work suggested by the work in multiplication. Written work includes division of numbers of four orders by divisors of one order, with and without remainders.

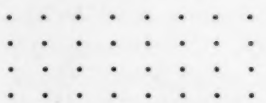
FRACTIONS.—Halves, fourths, eighths, thirds, and sixths are given. The reduction, addition, and subtraction of fractions is oral.

MEASURES.—Review of those already taught, and introduction of the new table of weights and measures. Square and cubic inch, square foot, and square yard are introduced.

THE WRITING OF NUMBERS.—Numbers of seven orders are read and written.

Second Lesson: the Multiplication Table of 8's.

On the preceding day the children worked out the table of 8's objectively, using lentils. They discovered, by grouping the lentils, that four 8's also made eight 4's.



The teacher said, "Count by 4's to 40. Count by 8's to 40. How many 4's in 40? How many 8's in 40? How many more 4's than 8's in 40?" One child said, "It takes twice as many 4's". Another said, "Of course: 4 is only half as many as 8."

They were told to add as the teacher wrote a column of eight 8's, and the result was called for. "Yesterday, when you

used the lentils, and made eight rows with 8 in each row, what figure did you make?" they were asked. One child said, "A square," and several remembered that six 6's had made a square, four 4's, etc. They were then told that when a number is multiplied by itself, we square that number. They were asked to square 2, 4, 8. The teacher then said, "Count by 8's to the swinging of this pendulum. Shall I make the string long or short?" A child was chosen to interrupt, whenever he wished, by clapping his hands. The class counted to 72 before the child clapped. Nearly every child was ready with "Nine 8's are 72," or "9 x 8 equals 72." This was tried several times. Sometimes the class counted silently until some one clapped. A child was chosen to skip across the room as the class counted by 8. If any member of the class wished to stop him, he was allowed to clap and the child must tell how many times he had skipped.

Another child stood before the class and said that he was thinking that a certain number of 8's made something. One child asked him if he was thinking that seven 8's are 56; another if nine 8's are 72. Each time the child shook his head the children were all the more anxious to try, until every combination had been used except "No 8's are naught." The child who gave that combination was right, and it became his turn. The children were in this way constantly hearing the correct combinations.

As another exercise, the teacher sometimes places on the board and erases quickly $4 \times 8 = ?$ $8 \overline{)64} = ?$ $\frac{8}{8} = ?$ $\frac{1}{8}$ of $72 = ?$ The children who know the result jump to their feet, and when the correct answer is heard they sit. They are also given an opportunity of working on paper, handing in such examples as these:

827	609
x 8	x 8

This written work is always done in a time limit, in order that the children may learn the importance of getting a piece of work done promptly and in the time assigned, thus avoiding habits of dawdling.

Facility in the use of numbers is attained through the exercise

of applying a table already learned to the working of abstract examples. A child is greatly delighted when he is able to beat his own time record in working such examples. This lesson has been essentially a "drill" lesson.

One of the interesting devices employed in this grade for the purpose of applying the multiplication tables is that of the school store. One corner of the room is given to the children for this purpose. The articles for sale are brought by the pupils, the result being a collection of toys dear to the hearts of the owners. Boys loan their favorite tops, top strings, and marbles, and girls bring their paper dolls, rolls of paper ribbon, and doll house furnishings, until no morning paper advertisement is needed to draw a crowd. This store is used sometimes for a few moments' incentive, often to make clear a problem in multiplication, division, or subtraction, and sometimes for an entire lesson. Later during the study of weights and measures a grocery store is introduced and sugar, meal, tea, and coffee are weighed and sold. In each case a storekeeper and bookkeeper are chosen by the class, the bookkeeper's business being to keep account of purchases made. The children are given toy money. During the first lessons but few purchases are made. It takes the purchaser some time to decide what four whistles cost at 8 cents each, and it takes the storekeeper even longer to find the change from half a dollar. The children, therefore, realize the necessity of being sure of their tables, and of being quick and accurate in making change. Suggestions as to the cost of various articles are made by the teacher, in order that the earlier problems may be so simple that the principle of finding the cost of more than one, when given the cost of one, is not lost. This is followed by such a lesson as this:

Strips of paper were given to each member of the class, and the children were asked to indicate the solution of the problem as each child made his purchase. Several such statements were written on the board, in order that there might be no misunderstanding; *e. g.*, 6 x 12 cts. equals 72 cts. During the thirty-minute lesson perhaps ten children made purchases and received the correct change. The first child bought a dozen pencils for 60 cts., and mentally decided that the storekeeper should count back the change into the purchaser's hand in this way: 60 cts., 70 cts., 75 cts., the change being 15 cts. As each

child in the class finished he stood, in order to show that he was ready to help either the purchaser or the storekeeper. The next child bought three books at 60 cts. each. Although a review lesson on U. S. money had preceded this lesson, several children wrote 3 x 60 cts. equals 180 cts. No criticism was made of this until the close of the lesson. It would have detracted from the interest and was of minor importance compared with the principle involved in these problems. The greatest difficulty arose when a child bought $4\frac{1}{2}$ yards of ribbon at 6 cts. a yard. Mentally he probably said, "4 x 6 cts. equals 24 cts.; $\frac{1}{2}$ of 6 cts. equals 3 cts.; 24 cts. + 3 cts. equals 27 cts." On the slips of paper the children wrote $4\frac{1}{2}$ x 6 cts. equals 27 cts.

These varied problems originating with the children are enjoyed by the entire class. At the same time they accomplish the results which the school aims to secure. The children are not puzzled by the complexity of the problems, since they themselves make them. The problems naturally grade themselves to suit the ability of different children, while the principle remains always the same. Furthermore, at the close of the lesson, the teacher has proof in the papers submitted of the attention and interest of each member of the class.

It is with some trepidation that most teachers enter upon the subject of division. Most of us remember too well our own introduction to this subject, and our attacks of mental paralysis when confronted by examples in long division that wouldn't "come out right." Above everything else the aim is to lead the children so easily into the mysteries of the subject that there shall be no break between the simple division combinations which they learned in their study of the tables, and their first example in short division. For example, when children learned the table of 7's they found that $\frac{1}{3}$ of 21 equals 7; 28 ÷ 7 equals 4; $\frac{63}{7}$ equals 9; $7\overline{)4\frac{2}{6}}$.

The first formal lesson is conducted in some such way as this: each child is given a handful of lentils and is asked to select twenty-four, laying aside the rest for future use. The teacher then says, "Divide the lentils into groups with 6 in each group. How many groups have you? How many 6's have you? How many 6's were you able

to make out of 24? Some one may run to the board and show what he has done." The child makes a picture like this:

"Can you show what you have done by the use of figures?" Finally some one writes, 24 divided into 6 groups equals 4. A shorter expression is called for, and these may follow: $6)\overline{24}$; $\frac{24}{6}$ equals 4; $24 \div 6$ equals 4. They are then told to add three lentils to the twenty-four, and arrange again in groups with 6 in each group. The teacher says, "How many 6's have you? Find out how many 6's there are in 27." One child says, "There are too many to make four 6's, and not enough to make five 6's. May we use 3 more?" Another child says, "We have half enough to make another 6 " The children are puzzled when asked to express this on the board. Attention is called to the fact that there are 3 lentils left to be divided by 6, and that it shall be expressed in this way: $6)\overline{27}$ $4\frac{3}{6}$ or $4\frac{1}{2}$.

Since they have already learned that one of the common forms of division is the fraction form, they easily understand that the fraction remainder shows that the number above the line is still left to be divided by the number below the line. The children are then asked to show with their lentils how many 6's there are in 32; in 37; and then without the use of lentils to show how many 6's in 45; in 59. The children work naturally and easily with the lentils. They have used them in building their tables since the beginning of the year. They made the table of 7's for themselves without assistance, and it is interesting to note in reviewing the tables that this is the table with which they are most familiar.

On the theory that nothing is gained by the use of objects after they have served their one purpose, the second lesson is purely mechanical. The lesson opens with five minutes rapid drill in review of the table of 9's. This form is placed upon the board and results are required rapidly:

$$\left.\begin{matrix}27\\42\\39\\85\\110\end{matrix}\right\} \div 9 =$$

A row of examples is placed upon the board thus:

$9)\underline{27}$ $\quad \frac{72}{9} =$ $\quad 9)\underline{85}$ $\quad 9)\underline{115}$

Each child who volunteers to work an example is first asked what the example calls for. It is absolutely necessary that a child should understand and be able to state clearly what he is called upon to do, before he begins to perform an example. We sometimes find time wasted in our higher grades, because this has not been insisted upon from the moment a child begins to perform problems. When the example $9)\overline{88}$ is worked correctly, the child is asked if he can prove that he is right. He says, "I could, if I had some lentils." Another child says, "Well, anyway, nine 9's are 81, and 4 more make 85." The teacher then shows that this is a perfect proof, and tells the class that it is the one always used in short or long division.

In the course of another lesson the first short division example is introduced, $4)\overline{264}$. The children have previously learned that $264 = \begin{matrix}200\\60\\4\\264\end{matrix}$ therefore they know that finding the number of 4's in 26 and then in 4 will not answer. It is not "what the example calls for." It is not difficult for any child in this grade to see that the first number to be divided is 26 tens, and that the remainder is 2 tens, or 20, which leaves 24 to be divided by 4. They are asked to prove each step in this way: 4's in 26 tens equals 6, and 2 tens remainder. 6 x 4 equals 24; 24 + 2 equals 26. Then, 4's in 24 equals 6; 6 x 4 equals 24. Then some one is asked to prove that there are sixty-six 4's in 264. Of course the proof is not always called for.

Children who are taught division in this way realize when they come to long division that its processes are written while those of short division are mental; that in long division all the proofs are written out because our knowledge of the tables does not serve us in the use of such large numbers.

The teacher of mathematics is concerned chiefly with the formal exercises and results, and this paper deals with that side

of the work. These results, however, are not of themselves of the highest value. They must be illumined and vitalized by a constant realization of the higher aim, the creating and developing of good habits of thought and work, which shall be the foundation of all subsequent work. This aim may be attained by encouraging a love for the work through varied and interesting presentation. The hopes of success are based on the principle which President Eliot teaches—"There is not a subject in all the range of human experience that will not develop to a very high degree every mental faculty in a mind which loves it."

M. H. L.

HISTORY AND GEOGRAPHY

EARLY TRADE AND DISCOVERY

In the first and second grades,the problems of food, shelter, and clothing are considered in the hunting, fishing, pastoral, and agricultural stages of the development of civilization. In the third grade, the children are introduced to some of the activities of the people who lived at the time when trade and discovery were developing. Here again they are led to participate in the problems that these people had to solve.

The children of this grade are eager for adventure by sea or land. Moreover they like to know that there is an element of truth in these adventures. Therefore, the era of early trade and discovery which follows the pastoral and agricultural stage of the second grade coincides with the sympathies and inclinations of the third-year pupil. Because at this time he begins to demand the "true story," we give this era a more definite basis by using Phœnicia, the home of the ancient traders, as a background.

The pupils of the Horace Mann School spend their summers in the country, at the mountains or the seashore. Their horizon, therefore, is not limited, and they readily appreciate the topography of a country like Phœnicia, with the forest-clad mountains in the background and the sea in front. The resources of such a country too are quite within the comprehension of the class: fish from the sea, timber from the forests, ore from the mountains, while from the shell-fish on the beach the Phœnicians made a dye of splendid color. Each child makes personal the questions, when this environment is given, "What will be your occupation? Are you in need of anything not found about you? How shall we obtain these?" In the previous grades, he has traded his bow and arrow for another weapon, and as a shepherd he has found it convenient to exchange with his brother the hunter. Third-year children are at a "collecting" age. They trade stamps in the morning before school, and can appreciate the desire of the Phœnician merchant to go in search of other commodities. The sea is the Phœnician trader's natural means

of communication with the outer world. It borders his home and the mountains abound in timber for boat-building.

These talks about the early merchants involve constant comparison with present conditions. The child of eight still lives in the world of make-believe, and yet is intensely interested in the life about him. Having sailed imaginary voyages in many-oared galleys in order to make exchange of merchandise with other peoples, a visit to the docks at 130th street takes on new meaning, and he watches the unloading of brick and coal barges with intelligent interest.

The sand-table is useful at this point in its crude representation of a land similar to Phœnicia in geographical conditions. The necessity for and essentials of a good harbor are taught. Here the comparison is made with the more complex conditions in New York Harbor of to-day. The dangers of navigation in those early days are not forgotten. The lack of compasses and charts meant that the sailors must follow the coast with its dangerous rocks and shoals and anchor at night. This subject is full of interest to the New York child. He is familiar with lighthouses and life-saving stations, and the many ways in which the United States government protects the lives of its sailors. The lack of protection in those early days makes it easier to realize the wonderful facilities of the present time. The harbor is represented on the sand-table, and galleys are made of clay with bright sails of paper. Each child tells what cargo he is taking with him on his galley and what he hopes to receive in exchange.

Many questions are not solved in the classroom, but are taken home to be discussed in the home circle. For instance: Of what are anchors made? How were ships anchored long ago? What use did the ancient peoples make of tin and copper? Of what were the sails and oars made? How did the voyagers find their way to the different lands they visited, and how did they find their way home? What were the first lighthouses? Bring pictures to show various kinds of boats. These and similar questions usually call forth interesting material from home libraries.

Food must be carried on these long journeys and ways of preserving it are discussed. Sometimes this question is unanswered for several days, but no merchant must set sail until

he has solved it. Robinson Crusoe has taught them the possibilities in the drying of fruit, but they are less familiar with the salting of fish. The present-day system of "cold storage" is known to most of the children.

In these voyages the names of many forms of land and water are mentioned, for the galleys sail into gulfs and bays and through straits. They cruise around peninsulas, shunning rocky capes and promontories, and sometimes land on a fertile island and camp by a fresh-water lake. These are not figures of the imagination, for an excursion is first made to the viaduct on Riverside drive and looking up the Hudson River we are able to see a peninsula, a cape, a promontory and a cliff. In Central Park we find a lake, while the trip in the Seeing New York yacht proves that we are on an island. All these forms of land and water may afterwards be shown to our satisfaction on the sand-table, or found in miniature in the unpaved street north of the school after a storm.

As the merchants develop their trade, they feel the necessity of accurate means of measurement. How is this to be done? Gradually the idea of weighing by means of balances is developed. Small balances of wood are made by the embryo merchants and a medium of exchange in the form of lead "money." (See "Manual Training.")

There are also the caravans which go overland for purposes of trade. To the child, the camel is the point of interest in these journeys. A leader of the caravan is chosen, the camels are laden, and imaginary journeys are taken and represented on the sand-table. Many questions come up in these journeys. Some of them are answered by noting conditions about us, others by an intelligent study of good pictures or a visit to the Zoölogical Gardens. For instance, "Why does the road often follow a stream? Note the N. Y. Central railroad near the school. What can be done if it becomes necessary to cross a stream?" (Later in the course these facts are recalled in connection with transportation and present-day engineering problems). "Shall we pass through the valleys or over the mountain top, and why? What route is taken by the crosstown cars on Manhattan Island? Why is the camel invaluable on the desert?" Many pictures are necessary for a clear understanding of the mountain pass and desert life, but these are

obtainable if both teacher and pupils are on watch for them.

These ancient traders were discoverers as well, since their search for trade naturally led them to unknown lands. These voyages of the early merchants may well point us to the voyages of Columbus and Henry Hudson, and the pupil may be led to feel the thrill of real discovery in the story of these great men. The children are told of Columbus' conviction that the earth was round and his anxiety to reach by a short way the rich country of India for purposes of trade. It is easy for these children now to realize the significance of the word trade in this connection. The final fitting out of the ships and the dangers and discouragements of the journey show the character of Columbus in a strong light, and make him a worthy hero in the eyes of the child. Emphasis is placed on the purpose of the voyage, the aids to navigation, the dangers which beset them, and the wonderful perseverance and courage of the leader.

Another voyage of discovery which closely concerns us is that of Henry Hudson. Henry Hudson appeals to the children as a real personality. The sailing of the *Half Moon* may be made most graphic to the boys and girls living within a stone's throw of the great river which bears the name of the eminent navigator. They appreciate the tales of the wonderful beauty of the shores, and they have a kindred feeling with the superstitious sailors who see unknown terrors in the mists, and fancy they hear the shrieking of goblins in the winds that howl about the highlands.

Henry Hudson thought he was in a strait between two seas and that beyond the farther sea lay India. He soon discovered his mistake and the children are asked, "How did he know it to be a river?" This emphasizes certain geographical facts which have been suggested in the caravan journeys, namely: the fresh water of a river, the lessening in width and depth as the source is approached, thus making it easier to ford or bridge. Although Hudson was disappointed in his project of finding a short way to India, the children are asked, "How could he turn his voyage to advantage? What effect did his story have upon the shrewd Dutchmen in Holland?"

Thus we have been led from a consideration of early trade

and discovery to comparatively recent voyages of discovery and the Dutch settlement on Manhattan Island. This leads us to a brief study of home history and to the beginning of the study of geography based on local environment.

M. I. B.

HOME HISTORY AND HOME GEOGRAPHY

Home History and Home Geography are closely related, as there is necessarily constant comparison between the past and the present.

The work in Home History includes the arrival of the first traders on Manhattan Island and the settlement of the Dutch town of New Amsterdam. As far as possible the biographical side is made prominent, but the little colony boasted few men of note. The growth of the town is traced and certain manners and customs of that day compared with ours. In cosmopolitan New York we cannot begin too early to foster a personal regard for the city itself. Home History, so called, with its cherishing of old associations, seems to accomplish this.

Captain Block headed one of the companies which came over to trade with the Indians. Captain Block was a sturdy Dutchman whose indomitable courage came to the front when his good ship *Tiger* with a cargo of furs, was burned to the water's edge. Because of this disaster he and his crew were obliged to partake of the hospitality of the red man for the winter. This gives an excellent point of departure for studying the ways of the Manhattan Indian and learning how his environment has made him different from the tribes of the West.

In the spring, Captain Block and his men bravely set to work to build a ship, the first ever built on Manhattan Island, and prophetically named the *Restless*. This fact suggests the following questions: "What materials were used? Where were they obtained? What tools were available? How could the Indian, from his wider knowledge of woodcraft, help the white man?"

The traders who visited the island, living in rude huts or sharing the Indian's home, in due time returned to Holland and told wonderful tales of the rich and fertile land. In the course of time, a shipload of colonists arrived from Holland, men, women, and children who came to make this island their home. Their first act was a picturesque one, and the purchase of Manhattan Island from the Indians lends itself to dramatization and to representation in clay and water-color.

The children, in imagination, become colonists. They decide they must first build shelter for their families, then a storehouse for supplies, a fort as protection against their enemies, and later the church, schoolhouse, and tavern. The traditions of Holland are carefully preserved in constructing the canal and windmill. Bowling Green, as one of the few landmarks still remaining, becomes a center of interest. Excursions to the congested down-town districts have been found most profitable when made by the class or by the individual child accompanied by some adult member of his household. Farms appear in the outlying country and roads are laid out. The evolution of the road is of equal interest to children and adults. The question is asked, "Were there any roads before the white people came?" Broadway, the main avenue that runs by our door, formerly the Albany Post Road, illustrates the evolution of a road.

A miniature New Amsterdam is built on the sand-table, the small paper houses with gable ends being volunteer home work. The class also unite in constructing a more pretentious Dutch house with wooden sides and gable ends of brick. Bowling Green is represented by the aid of powdered green chalk. Each house has its flower garden of bright tulips, these being variously represented according to the ingenuity of the children. The Albany Post Road is shown, and the road leading to the ferry, besides pathways and lanes leading from house to house and to Bowling Green. The half-moon docks in the harbor and the Dutch ship complete the scene. The ship is often home work and is frequently out of proportion to the dock by which it is moored, but we are not critical. The presence of the ships makes us ask, "What did the ships bring to the colony? What did they carry away? How did the colonists obtain farm products?"

Communication with the neighboring colony of Brooklyn is made by means of a ferry. The pupils are familiar with the ferry of the present time, and this furnishes a striking contrast with the old method of hailing the ferryman by means of a fish-horn attached to a tree, the ferry boat itself being a rough flatboat worked by sweeps. The tavern also with its cordial smiling host, and its sanded floor swept into designs by the housewife's broom, may be compared with the Waldorf-Astoria

of to-day. Other subjects of interest are the schools, the "bucket brigade," the watchmen, and the post-office department.

In these lessons, much information is given in story-form by the teacher, but many suggestive questions may be asked, drawing upon the children's daily experiences. A topical outline is placed on the board as a review of each lesson and the pupils retell the stories, thus giving the teacher opportunity to place emphasis on important points. Certain facts should be clear in the minds of the pupils, and these have been outlined as follows:

Voyage of Henry Hudson.
- Purpose.
- Result.
- His return to Holland.

Voyages of Dutch traders.
(Captain Block as type).
- Burning of ship.
- Life with Indians.
- Building of first ship.

Dutch Settlement.
- Purchase of island.
- Building of houses, fort, storehouse, church, schoolhouse, tavern.
- Laying out of roads.
- Government of the colony.
  - Peter Stuyvesant as governor.

Some of the facts in Home Geography have already been considered in connection with the study of early trade and discovery or of the early history of Manhattan, but in the middle of the third year, the pupils are ready to organize and extend their knowledge of their immediate environment. The plan is to lead the children to see the geography of their home locality and gradually to prepare them for their later work in geography through a review of their daily experiences. Later on, definite topical outlines are written on the board as a guide to the pupils. The subjects discussed, arranged topically, are as follows:

I. *Homes.*
- Review primitive homes.
  - General characteristics.
- Our Homes.
  - General characteristics.
    - (Compare with primitive.)
  - Division of labor.
  - Government (To be used later in showing the necessity for government in the city.)

II. *Groups of Homes.*
- Reasons for grouping.
- Small groups.
  - Country—village.
- Large groups.
  - City—N. Y. in particular.
    - Extent.
    - Number of people. (Shown by busy streets, tall buildings, crowded cars.)

III. *Streets.*
- Arrangement
- Pavement
- Slopes
- Drainage
- Care

} Compare N. Y. with country or village familiar to children.

IV. *Surface of Land.*
- From school to home.
- Hills, valleys, plains, cliffs. (Observed in environment of school and home.)

V. *Drainage.*
- Stream.
  - Movement of water.
  - Obstructions to flow; falls; rapids; lakes.
  - Width—Volume.
  - Work.
  - Use.

VI. *Map Interpretation.*
- Distance.
  - Units of measure applied to desk, room, city, &c.
- Direction.
  - Points of the compass.
  - How determined.
- Scale of Map.
  - Idea developed.
    - Application made by drawing desk, room, school-garden to very simple scale.

VII. *New York a Great Commercial Centre.*
- Evidences.
  - Products received.

Food—bread, milk, etc.
Clothing.
Building materials.
Fuel.
Products transported.
Meats—grains, etc.
(Children have seen vessels loaded)
Manufactured goods.
(Study labor involved in production, transportation, etc).

VIII. *Transportation.*
1. Railroads.
Necessity.
Relation to surface.
(N. Y. Central).
2. Water Routes.
Hudson.
Importance.
Vessels—numbers, kinds.
Scenery.
Harbor (N. Y.)
Essentials of a good harbor.
Size—depth—shape.
Islands—peninsulas.
Vessels—kinds.
Piers.
Protection to shipping.
Lighthouses.
Buoys.
Life-saving stations.

World as a Whole.
The Earth.
Form—(Use of globe).
Distribution of land and water.
Points of compass applied to globe.

Space does not permit a detailed account of all the topics just mentioned, but certain of these are described as indicative of the work in general.

Topic III, *Streets.*

In upper New York where the Horace Mann School is located, the principal streets and avenues are arranged at right angles. Every child knows this and quickly makes a comparison with the roads about his summer home. He is led to see a reason for this regularity in the city streets, economy of space being important. On the sand table he arranges a series of regular

city-blocks where land values are high and the tall apartment house is a necessity. He pictures also, through the same medium, the village where he spent the summer, with its "four corners," its two-storied, roomy houses, surrounded by green lawns or broad fields.

The pupil's attention is then called to the kind of pavement about the school. He may not be familiar with the pavement used on a business street as compared with the drives in the park, but is eager to observe and find reasons for this difference. Observation after a rainstorm or when the snow is melting, shows him that the pavement slopes from the middle toward the sides in order to shed the water, and he realizes the use of the sewers and gutters.

The "white angel" of the street-cleaning department is a familiar figure, but few children have ever considered that they may be active members of this department by carefully refraining from scattering papers and luncheon at recess. As an isolated bit of preaching, this would have little effect on the children except as evidence of further "fussing" on the part of their elders, but once let them gain a personal interest in the street-cleaner and his work and they become over-strenuous in their efforts.

The policeman is the natural enemy of the city-bred boy. Be the child rich or poor, the "cop" is his legitimate target. On the other hand, hero-worship is as natural to him. A few well selected newspaper accounts of the courtesy and care of the ordinary policeman—and these accounts need not be fairy tales—will do much toward making the children feel their indebtedness to these servants of the public.

Topic VI—*Map Interpretation.*

The ability to interpret a simple map is necessary for the intelligent understanding of fourth grade work and to make it possible for us to trace our route, in school excursions or in private excursions. Throughout the year, great emphasis has been laid on the points of the compass, the directions being pointed out in the classroom until the child seems to have the feeling for the "north." The simplest drawing to scale is the school desk. Measurements are taken and a scale decided upon. The scale is noted on the map, also the points of the compass. The classroom may be drawn to scale, also a portion of the school

garden, and for home work the pupil may draw his own room to scale.

In order to explain the wall map which is used in the fourth grade, some of these plans are hung in the classroom with north at the top. In this way the children are disabused of the idea that the north side of a map is higher land because of its position. They see that maps are usually hung in one position merely as a matter of convenience, and that all lettering is placed on the map so that it can be read from the bottom or south side. A map of this section of New York City is then placed on the wall, and the home, school, and church located. Various journeys are taken with the school as a starting point.

Topic VIII—*Transportation.*

The ways of getting to and from school include carriages, automobiles, on foot, trolley, subway, and elevated cars. In the parks we see people riding on horseback, and our imagination helps us to picture unsettled parts of the country in the narrow and rugged trails. Articles of food, as well as ourselves, must be carried about from one place to another, else our breakfast table would suffer. This suggests the study of transportation by water and rail. The railroad proves a fascinating theme, it being the ambition of many boys at this time to become engineers. The New York Central, just west of the school, is a familiar road and we trace its level track up the Hudson River, noting the tunnels, excavations and filled-in sections. Other roads are described where famous loops have been made, where bridges or trestles have been constructed with great skill.

Transportation by water is second only in interest. The Hudson River is at our very door. It takes only five minutes to walk to Riverside drive where one may see the procession of steam yachts, racing shells, fishing schooners, lumber barges, tug-boats, and excursion steamers, while just upstream from us is the ferry, connecting with the one trolley that climbs the steep face of the Palisades. At certain seasons the shad nets may be seen, and the brick barges tell the story of the brick-yards up the river, from which comes the larger part of the materials we can see in house-building about us.

The scenery of the Hudson is a delight to the adult. The child does not express his feeling in regard to it, but a constant observation of the many changes which take place during the

year, and a judicious choice of legends surrounding it, cannot help but gradually endear it to him. This is important, as the New York child has few associations to carry with him into later life.

The Harbor is also familiar, because of the visits to the aquarium in Battery Park and trips to the Jersey shore and to Staten and Long Islands. We see pilot boats, buoys, and lighthouses, which recall the subject of protection to our shipping. The lighthouse keeper and the men of the life-saving station enter the category of the fireman, policeman, and engineer as true heroes. Some of the children know personally the men at the life-saving stations, and have had short but thrilling rides in the surf-boats. These experiences occupy several lessons, and again the sand-table is useful in making our knowledge concrete. We represent harbors, straits, islands, and peninsulas, and trace a safe course for incoming ships by means of buoys.

Definite preparation is made for fourth grade work in the use of the globe in the latter part of the year. After the idea of the world as a whole has been developed, the children are made familiar with the points of the compass on the globe, and the continents and oceans are named and located. Individual globes are used, and these are accessible before school and during free periods. The pupil becomes familiar with them by constant association.

M. I. B.

MANUAL TRAINING

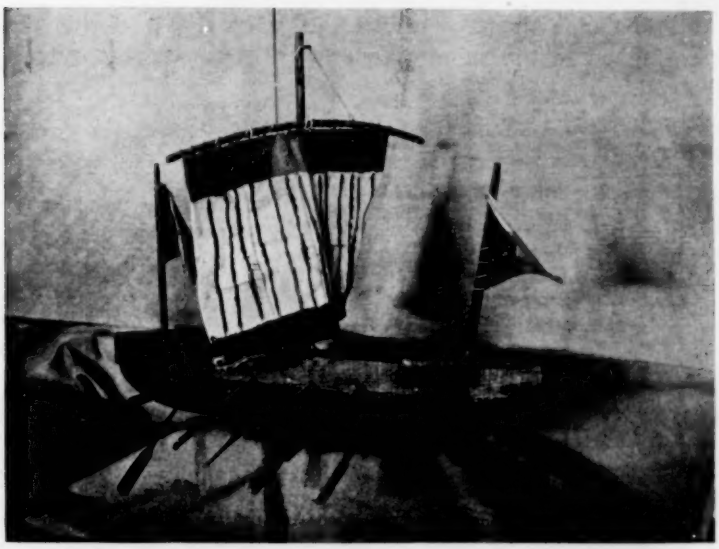
In the early stages of the hunting and fishing, pastoral and agricultural periods, industrial occupations constitute a very large share of the social activities of a people, and these are of such a nature as to be readily realized and entered into by pupils of the first two grades. In the later stages of social evolution, however, occupations become more diversified and complex, and activities other than industrial become significant. This is true to a large extent of the period of early trade and discovery, which is studied in the third grade.

The development in the use of metals is an important fact of this period, but not a great deal can be done with such materials on the constructive side. We can only trace the sources from which metals are derived, and show their value for tools and weapons, as compared to wood and stone. Easily fusible metals can be melted and cast. Soft metals can be hammered and cut, but not very much beyond this can be accomplished in the class work. The possibilities lie in the direction of group experiment and class discussion, rather than along the lines of constructive work.

The problem of transportation in this period divides itself into the two parts—transportation by water and transportation by land. As Phœnicia furnishes the background for this study, transportation by water is considered first. After a discussion of the kind of boats that such a people may build various forms of galleys propelled by oars and sails are worked out, and fashioned in wood or clay. Sometimes a group of children work together on a large galley, such as is shown in the illustration. In this one each child in the class made an oar, while a group of boys made the boat, masts, etc., and the girls sewed and decorated the sails.

The consideration of land transportation does not offer many opportunities for constructive work. A study is made of different methods of carrying burdens by human labor, and various contrivances such as pack baskets and pole carriers are worked out in small size. The different capacities of various

beasts of burden, such as the horse, donkey, and camel are investigated and the best methods by which each can be made of use are studied. Simple forms of drag or sled which do not require much skill in construction are made, and then a cart with wheels is evolved. Again a representation of a caravan crossing a desert is made on the sand-table. The camels modelled in clay with loads strapped to them are seen following a trail towards a green oasis.

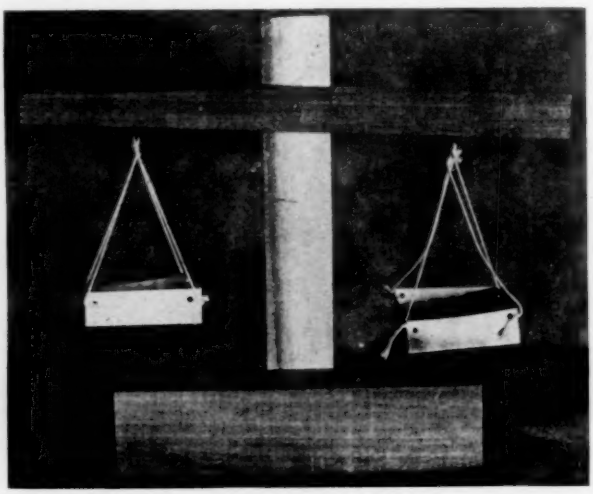


Galley

The great necessity in such work is to make each study a genuine problem for class thought, and each result so thoroughly an expression of the thought that it will be alive with significance.

The necessity for accurate means of measuring as developed by trading demands constructive work in a number of ways. The need of standards of weight and of money suggests the making of a small balance. This is made in the simplest fashion, of three pieces of wood, a base, upright, and balance beam, each cut to the proper size. They are nailed together and small trays of cardboard are fastened to each end of the balance beam. The exact balancing of the beam is a difficult task, and calls forth the ingenuity of the children. One end is heavier than

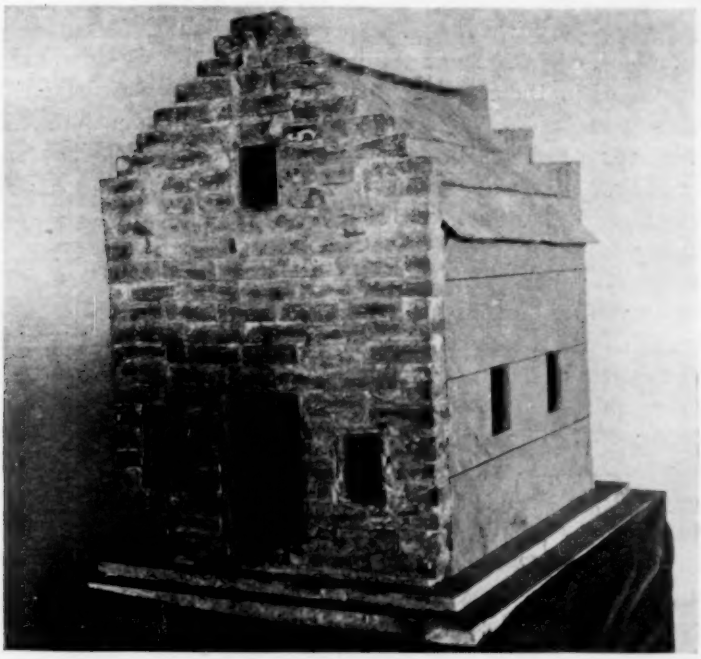
the other and the question arises "what can be done to make it balance?" All sorts of ways are suggested and tried, such as cutting off the heavier end, adding more string or extra nails to the lighter, until the problem is solved. From this we pass to the establishment of a money standard. First a small piece of lead is cut and used as a unit. Then another is cut a trifle larger and trimmed down until it exactly balances the first. Each of these pieces is marked (1), and as many are made as desired. Then two units are placed in one tray, and a piece cut to balance them. This piece is marked (2). Other pieces are weighed in the same manner until a convenient system is evolved.



Balance

Trade in such things as cloth brings up the problem of measurement of length and the standards that would propably be used. Thus we pass to the idea of the cubit, (the distance from the point of the elbow to the tip of the out-stretched finger) the ell, (the length of whole arm,) and the foot, as the length of the human foot. The children make measurements on the blackboard of the length of their own arms and see by comparison that they differ considerably. In this way the necessity for a fixed unit of measurement is seen, and the meaning of the modern standards of foot and yard is made clear.

The question of measuring time comes in naturally with these other problems, and the problem of how people who had no clocks can accomplish this is studied. The idea of the sun-dial for measuring large periods, and of the hour glass for shorter periods is brought out, and both of these instruments are constructed, the latter in the very simple form of an inverted paper cone with a small hole at its apex.

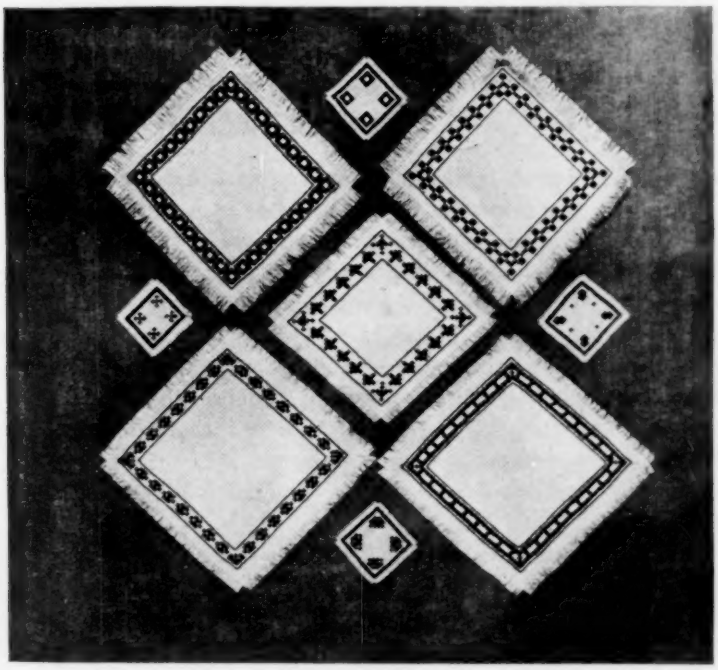


Dutch House

In the article on "Early Trade and Discovery" it is shown that the early voyages of trade invariably led to voyages of discovery, and these in time to settlements. In this connection the voyages of Columbus and of other explorers are studied leading up to the Dutch settlements on Manhattan Island. To illustrate the life of this period sand-table representations are made, showing small houses of the old Dutch type, with gabled ends, made of cardboard and painted to represent bricks. The Dutch fort is also shown walled around and having the

church and schoolhouse within its walls. Small boats and craft are seen just off the shore. A large Dutch house may be made by the class to show the development in house construction from the hand-made and sun-dried bricks used by the agricultural people to the moulded and kiln-dried bricks used by the Dutch. Simple elements in frame house construction also enter in, as the sides and back of the house are usually made of wood. Several children in consultation with the teacher plan the size and proportion of the house. Then the methods of making bricks in moulds is discussed with the children, and they are led to see the advantages in the ease, rapidity, and regularity with which the bricks can be made. They are also led to see that the process of firing or baking the bricks greatly increases their strength, and to realize the consequent possibility of more permanent and safe shelters thus afforded. A simple form of mould is evolved which resembles a box without a cover. This is made of wood, just the size of the brick (3″ x 1½″ x 1″). The clay is packed in very carefully, so that there will be no cracks, and the mould put aside until it loosens from the clay, as it will shortly. When sufficiently dry the mould is turned over and the brick falls out. The moulds can be used again and again until the necessary number of bricks are made. Sometimes the children make their moulds long enough so that several bricks can be cut from the one strip of clay. After the bricks are made and thoroughly dried they are ready for the kiln. The children gain a good idea of the kiln and the manner of operating it, by visiting the one in the Manual Training Department of Teachers College. Usually one or two class lessons are spent in brick-making, and it is then assigned to a group while the rest of the house is being constructed by the other members of the class. The structure, however, is first considered in a class lesson, and the simple parts such as rafters, sills, posts, shingles, floor beams, etc., as well as the number of each, provided for. When these points are thoroughly understood by the children, the dividing into groups and carrying out of the actual work becomes a simple matter. Two or three children are usually selected as builders. Sometimes the same children build the entire house, and sometimes different ones are chosen for each lesson. The brick part of the house is built last of all, the bricks being fastened together by cement.

It will be realized that the work outlined thus far is very largely group work, and that it leaves much time to be otherwise used. In this grade the differentiation into the usual subjects of school study begins and to a certain extent, each subject becomes more or less independent of the others. So in hand work certain lines are introduced which have no immediate relation to the other work, but which are either further developments of activities already begun in the lower grades, or new lines which broaden and carry forward the industrial thought. Pottery, basketry, and simple cross-stitch embroidery, are among the lines of work pursued.



Cross-stitch Embroidery

In pottery, points of handling and technique begin to be emphasized. The method of building up as compared to that of coiling or moulding in the hand is considered and found to be easier for large pieces. The attention is largely directed to a study of form and an effort is made to have the children gain

some appreciation of form, symmetry, and finish, and to work with these aims in mind. A small modeling tool, which has one rough edge and one end slightly curved, is used as an aid.

Tiles with plain surfaces, and simple jars and bowls, are attempted. For the latter a model is placed before the children as they work, and while they do not try to make an exact reproduction of it, either in shape or size, it serves as a guide for proportion and outline. Simple designs in bands are drawn by the pupils and used as decoration on some of the work. These are cut in with the tool or a sharp pointed pencil.

In basketry some new weaves are introduced, such as the diagonal effect, and twining in soft materials, and better technique and finish are attempted. Braided baskets and saddle bags are made for use in the illustration of land transportation. The method of making square splint baskets over moulds, as compared to making them free hand, is considered and several are made in this way.

The cross-stitch embroidery on coarse canvas gives an opportunity to teach several simple stitches in sewing, and at the same time furnishes a medium in which the children can actually apply some of their work in design. Such work is not unrelated to the main thought of the year since the Phœnician tradition tells us of the "embroideries on fine linen." Small squares of canvas are embroidered and used as covers for pen-wipers, several pieces of chamois skin being fastened underneath the canvas by a stitch taken through the centre. Mats are also made upon which border designs are embroidered. (The way in which the designs are developed is fully described in the article on "Art").

From the study in this grade of the necessity for accurate means of measuring time, distance, and weight, the child begins to realize more fully than has been possible heretofore the meaning of the word accuracy. The teacher continually emphasizes the value of quality, commends its excellence when it appears in the work of the class, and strives to inculcate lessons showing its importance for continued success.

L. H. W.

NATURE-STUDY

Since home geography, which is taught in this grade, is simply the study of the immediate environment of the school with special emphasis on human interests, it is evident that, so far as the home geography is based directly on actual study of natural objects and processes, it is true nature-study as that term is now commonly understood. Even the most distinctive part of the home geography, namely, that dealing with human affairs—such as homes, streets, railroads, local commerce—is with few exceptions based on natural conditions, the study of which apart from the human interests and adaptations would clearly fall in the domain of nature-study. It must be recognized then, that in a grade dealing with home geography on an observational basis there can be no real lines drawn; and the best arrangement is to unite the points of view of nature-study and geography in a course known as "Nature-Study and Home Geography."

It is not to be expected that the correlations between the nature-study and the geography of this grade will be closely connected in time. The order of nature-study is largely determined by the progress of the seasons, and this may not fit the logical development of the geography lessons. For example, the study of vegetables suggested below in connection with garden work necessarily comes in the early part of the school year, before the problems of local food supply are reached on the geography side. However, few teachers will claim any fundamental importance for close correlation in time. The one essential is that the observational work of the nature-study should precede those geography topics in the development of which the nature-study may help.

For two or three years the nature-study of this grade has been undergoing many changes in order to bring it into closer connection with the home geography. The outline below is simply the plan for work in 1906–07, and it may be expected that with another year's experience changes will be made in the details of the outline, but not in the general point of view as now expressed.

I. Study of products of the vegetable garden planted by the pupils in preceding spring, life-history, methods of cultivation, varieties, uses as food and for other purposes, insect enemies. Correlation with art whenever practicable. Pupils should visit markets and look for vegetables not in the school garden; also learn where the markets get their supply of various common vegetables. Later make use of these garden studies in the geography problems of food-supply and transportation. This work begins with the school year.

II. Study of flowers, trees, and homes. In the topic "Our Homes" in the geography, emphasize the beauty of home surroundings, especially as produced by flowering plants and trees. Study of wild flowers and trees which add beauty to our home surroundings and of plants cultivated solely for their ornamental qualities. This topic may include wild plants in all seasons in which materials are available; ornamental plants growing in the school garden; growing flowers from bulbs, seeds, and cuttings in garden and green-house in autumn and winter; and the planting of flower gardens in the spring term. No matter in which season ornamental plants are studied teachers should emphasize the idea of the relation of plants to attractive home surroundings. The preservation of trees and native wild flowers and the cultivation of plants for home adornment should be made the most prominent ideas in the minds of the pupils. The extent of the work in this topic will depend upon time and the interest of teachers; but its possibilities are clearly not limited, especially in autumn and spring.

III. Study of fruits, wild and cultivated, especially those used as food. First the more perishable ones; others available even in mid-winter. Structure of fruits, varieties, life-history, and cultivation of plants which produce them, *e. g.*, how an apple tree is started from seed, grafted (specimens for illustration), pruned, treated for insects and plant diseases, fruit gathered and marketed. The kinds of fruits found in markets in autumn, winter, spring, varieties, values, where grown, how preserved.

IV. Water. Some topics which might be developed on an observational basis in connection with this subject in geography: forms of water—simple experiments. How we get water in the country; in New York City. How plants get water from soil (simple experiments). Why Croton water is muddy. Allow

to settle and also filter some through cotton or paper. Where did the mud come from?

V. Soils, in connection with garden work and the geography. Growing plants in fertile and barren soils. Soils, water and drainage, kinds of soil in New York City.

VI. Weather observations.

VII. Simple hygiene of the home and its surroundings.

VIII. Life histories of some insects, especially those affecting the gardens and ornamental plants around homes, and bees and ants kept in observation boxes.

ART

The purpose and aims of the art course in the third grade are the same as those of the second. Much of the work is a repetition of last year's thought. This repetition is necessary to awaken memory, to connect the present effort with the past achievement, to strengthen the foundation already laid, and to make it of immediate use. While the work at times might appear to the uninitiated identical in these two years, yet it is different, for the child is a little older, has a little more experience in seeing and doing, a little more appreciation, a little more power, in fact has a year's additional growth of mind and muscle. All

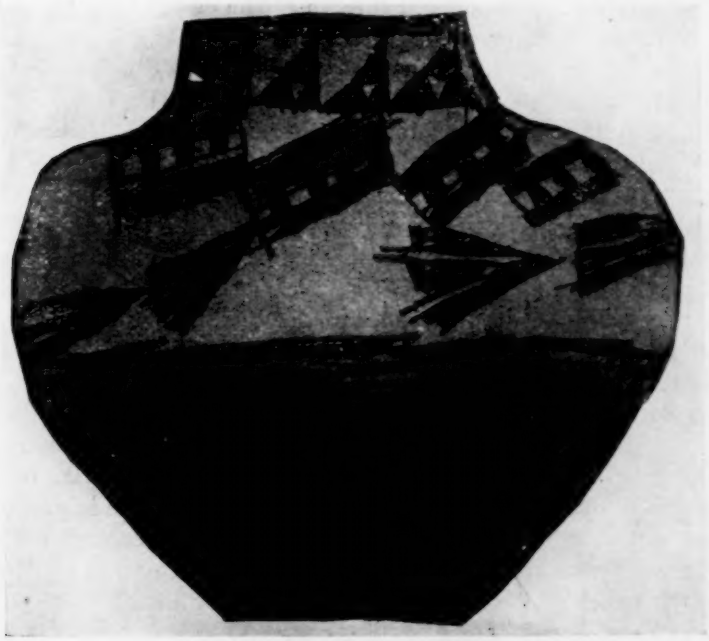
Plate with border of ships

Boy wheeling barrow

this is taken into account, and the exercises are planned to continue this growth. While it is a serious mistake to require more of a child than he is able to give, since this can result only in confusion and inability to understand and consequently to do, it is equally disastrous to ask less than he is capable of, for if this is done repeatedly, he soon feels that there is no need of effort on his part. Therefore great care is taken that while the work given does not overreach the child's mind, it still does demand the best thought of which he is capable at this age. By this time the art work should strengthen into something more exacting than in the previous grades. The child should study in a thinking way.

If this is done, he begins to feel that to make things beautiful is a delightful and serious experience.

The subject matter of this year is in part old and in part new. We again use flowers, fruits, vegetables, animals, figures, landscapes in both representation and in design. Early trade and transportation, and early life in Manhattan are studied in this grade, and much of the landscape and figure work is connected with these subjects. Ships of various kinds, one or more in a



Indian bowl (drawn from object)

given space, a frieze of ships (each child painting one panel for it), borders of them on plates or bowls, camels in a given space in a frieze, characteristic Dutch landscapes, Hudson River scenes, children in Dutch costume feeding geese or wheeling barrows, are some of the new subjects.

The child works as before directly with the brush in mass, with pencil outline first and full color afterward, with colored crayons, and occasionally with paper applique. No new medium

is introduced. The methods followed are those that have been suggested in the second article.

For festival cards we often use block prints. The teacher or older students cut the block. The printing pad is carried into the classroom, and each child prints his own card and then paints it. Since block printing in the schoolroom may still be new to some, we will suggest some ways in which it may be easily done. Any close-grained wood will answer for the block. Gum wood is good, pine will do. The block is sawed about the right size and sand-papered smooth. The design may be drawn directly upon it, or it may be drawn on paper, and the paper pasted on the block. A sharp pocket-knife may be used for the cutting, although a sloyd knife is better. The block may be cut for outline or mass printing. In both cases the parts to be printed are left raised, the other parts cut away. For the younger classes we usually use the outline block. For printing a black outline, almost any black ink is good. To most of the inks a little mucilage or paste must be added. An inking pad is made of several folds of felt or cheese-cloth placed on a pane of glass, or better still on an old-fashioned school slate. For a printing pad we cover a drawing board with several thicknesses of desk blotters, and over these place a few folds of cheese-cloth, tacking the cloth down firmly so that the pad is perfectly smooth. Such a pad, if cared for, will last a year or longer. Newspapers might serve instead of blotters, even a package of drawing paper may take the place of the pad. Pour the ink on the inking pad and spread it evenly with a large brush. Use enough ink to saturate the cloth. Press the block on the inking pad and then on the paper which has been placed on the printing pad. This gives a perfect impression of the block. As soon as the ink is dry, the child may fill in the outline with washes of color. Let the child experiment with the placing of the block or blocks, and decide which spacings are best. Even with the little child some connection may be made between this simple process and the great industry of printing. He can be told that the first books were all manuscript, that only a small number of people could read and write at that time, and that a very few were engaged in writing the books. He can readily understand how laborious and slow book making must have been, and that the very wealthy alone could afford to own even a few books. Then

came the discovery of block printing, this very process that he is using, and the first printed books were made in this way. If possible show him an old illuminated manuscript, and a block printed book.

In this grade the relation between the manual training and art department becomes closer. Designs are made in the latter department and applied in the former.

Cross-stitch embroidery is taught in the third grade. The designs are made on cross-section paper. If the problem is one that requires a border, the child is asked to make a number of spots or units. He selects the best, and then connects it in several different ways. He chooses the best of these for his border. But in turning the corner he finds a new difficulty. Perhaps his unit can be used in the corner, perhaps it cannot, in which case he experiments until he finds a spot that will go in the corner and yet retain some of the elements of his repeating unit and hold them together. The next lesson is given on the light and dark of his pattern. He works out his design in several different arrangements of light and dark, that is he makes some stitches light, some dark, and the best of these is taken. Finally he chooses the colors of his floss. In this he is led to consider harmony of color and value of tone. In other problems instead of a border he plans corner spots that are not connected. This is given in the same way.

Designs are also made for some of the cardboard work, and may be applied in paint, colored crayons, or cut paper. On candle shades the designs are pricked.

The wild rose designs were given in a dictation lesson, that is the design was dictated part by part by the teacher, while the class followed her directions, the whole class drawing each part at the same time. The colors were yellow or orange and black.

In giving the lesson for illustrating "The Tortoise and the Hare" (the class had read the story), it was decided to take the moment of surprise when the hare wakens and sees the tortoise at the goal. The children were asked what would be in the picture. The tortoise and the hare were of course named first. The teacher then drew on the blackboard a large tortoise and a small one, explaining that he would look like the former if near, like the latter if far away. She drew several hares in different

positions. She next asked what else would be in the picture. Some one answered, "The goal." "What was the goal?" "A tree." A tree was drawn. "Was there anything more?" One child remembered that the hare went to sleep under a bush. So a bush was put on the board. It was decided that there would also be sky and grass. Then the teacher drew three or four quick little sketches showing different positions of the objects in the space, that is three or four different compositions. The children discussed the merits of each, and they were erased. But the drawings of the separate objects were left on the board. The children began their illustrations in outline with pencil. When the outlines were finished several painted compositions of the subject were hung up to suggest possible color schemes, after which the children decided upon their colors and painted their outline drawings.

Varying the subject and the material keeps the mind alert and the interest keen.

Each year's work increases somewhat the child's power to appreciate and therefore to enjoy beauty wherever he may find it, and to add something of beauty of his own creation to his life.

M. C. U.

PHYSICAL EDUCATION

Each pupil is examined carefully by a physician connected with the Department of Physical Education. Tests of sight, hearing, nervous control, and the muscular system are made, and the condition of the throat and nasal passages, of the heart and lungs, and of the spine and feet, is determined. A report of this examination is sent to the parents and to the classroom teacher. The latter finds the information very valuable, for it enables her so to arrange her daily program that the physical side of the work may receive prominence. This information leads the teacher to be just in her requirements, careful in the selection of seats for those who need consideration in the matter of sight and hearing, and judicious in her general treatment of the children. Where simple corrective exercises are needed, she may plan to present them in the room. When more serious defects exist, scientific treatment is given by a specialist in corrective gymnastics.

Because little children become easily fatigued, frequent periods for relaxation and free play are provided in the daily program for the classroom. When one set of muscles has been in use for a time, exercises demanding the use of another set are given. Furthermore, much of the regular school work tends to develop and control the larger muscles; for example, planing, sawing, and hammering in manual training, dramatizing in reading, singing, and large free movements in art work.

Each class spends twenty minutes every day in the gymnasium under the direction of a special teacher. The general nature of this work is indicated by the following outline:

Marching.

Same as in second grade.

Marching in fours—use "fours right" and "fours left."

Dancing.

Simple steps.

Same as in second grade.

Follow step.

Pirouette.

Combinations.

(a) Galop.
Circle dance.

(b) Scotch dance.
Circle dance.

(c) "Dancing Topsy."

(d) Three slides and hop with right foot. Repeat with left.
Step to side with right. Point to side with left.
Repeat, starting with left.
Step to right and pirouette.

(e) Slide with right foot—draw left foot to right—hop on right and extend left forward.
Repeat, starting with left.
"Step and hop"—four times alternating with right and left—going around partner—who takes "step and hop" in place.

Floor Work.

This, in the third grade, assumes a different character. Progression is toward definiteness, ability to isolate movement, which means increased coördination. By insisting upon accuracy of movement and the holding of positions at the end of each movement we work toward our aim. It is not intended that more than a beginning should be demanded in the third grade. For this reason it is difficult to make classifications; those given are made with the aim, rather than the actual result, in mind. All possible combinations are not included.

Definite.

Response to command.
Same as in second grade.
Add
Hands on neck.
Arms upward—bend.
Two steps in any direction.
Three steps in any direction.

Exercises.
Arm extensions.
Arm raising sideways with heel raising.

Arm bending with heel raising.
Arm extension with heel raising.
Same combinations with knee bending from stride position.
Same with alternate foot placed sideways or forward.

Indefinite.

1. Arm and leg movements.
   Clapping hands overhead with heel raising.
   Same with knee bending—Stride position.
2. Trunk movements.
   Clapping hands overhead and behind both knees.
   Stride position.
   Chopping movement.
   Arm extensions alternating with forward bending.
   Same alternating with side bending.
   Same alternating with deep knee bend position—stooping with hands on the floor.
   Arm flinging sideways—then forward and downward with forward bending.
   Arm flinging sideways and alternate side-bending, touch floor with hand on same side.
   Clapping hands overhead and under alternate knee.
   Same raising knee to chest.
   Same raising leg forward with knee straight.
   Arm flinging forward and upward with trunk twisting alternately to left and right.
3. Jumps.
   Separating feet sideways.
   Separating feet forward and backward.
   Jumping up and down on both feet.
   Running in place.
   Clapping hands overhead and separating feet sideways.

Apparatus Work.

Hand Apparatus.

Dumb-bells.

All of the combinations given in the floor work may be adapted for use with dumb-bells.

Balls.

Bounce with right—catch with right.

Bounce with left—catch with left.
" " right " " left, then
" " left " " right.
Same series—tossing ball instead of bouncing.
Alternate bouncing and tossing with right hand.
" " " " " left "
Slow march forward—bouncing with right hand.
" " " " " left "
" step sideways " " right "
" " " " " left "

Heavy Apparatus.
Jump standards.
Plain running jump—work for form in landing.
Stall-bars.
Hanging.
Raising heels.
Separating feet sideways.
"About-face" hanging.
Separating feet sideways.
Alternate knee upward bending.
Both knees upward bending.
Standing on floor—hand grasping bar at shoulder height.
Leg flinging sideways.
Horizontal Ladder.
Hand travelling sideways—with swing and without.
Hand travelling forward—with swing and without.
Travelling forward on hands.
(Work for form in position)
Hanging.
Separating feet sideways.
Alternate knee upward bending.
Both knees upward bending.
Ropes.
Swinging.
Climbing.

Boom.
High
Side travelling—with swing and without.
Hanging. Same work as on ladder.
Low (very)
Vaulting—without regard to form.
Giant stride.
Galop step sideways.
Stride—right and left.

Games.

Beater goes around.
Hare and Hound.
Games with beanbag.
Same as in second.
Games with basket-ball.
Same as in second.
Crossing the brook.
Stepping from mat to mat.
Hopping " " " "
Last couple out.
Three deep or Catch the third.
Relay race with beanbags.
Relay race with Indian clubs.

H. N.

MUSIC

With the lengthening of school experience the first songs of a new school year are apt to be the favorites of the previous year. The teacher has little opportunity to choose, so urgent are the requests for the old songs without much reference to appropriateness of the subject. A spring song or a Christmas carol may be demanded while the glory of the autumn color is being reflected on the walls of the schoolroom. It is not merely the interest in the tune, but the pleasant associations that are connected with the song, that lie back of these requests.

The revival of past favorites gives the opportunity for tuning the class, so to speak, for its new year's work. What was learned with reference to tone quality, enunciation and good rendering is readily brought to mind, not so much formally, as in the act itself.

With this desire for song favorites comes a new spirit. The second-grade pupils have grown since they left school last spring. They are conscious of being third-grade students, and the teacher is quick to utilize this feeling to introduce songs not only entirely new but those making a greater demand on concentration and individual effort. Such a song as "Wynken, Blynken and Nod," so gracefully set by De Koven, might seem from the subject too young for the grade, but its appeal to the imagination through curiosity about the boat and its three fishermen, its graceful rocking motion, its decided change of key, giving an individuality to the benevolent moon, make the song attractive even to older children. "The Crow," by Miss Knowlton, where the accompaniment makes a demand on the attention and the realistic imitation of the crow call revives memories of summer days is another very popular song. "The Leaves' Party," "The Squirrel," and "Honey Bee," by Gaynor, are used for their fall associations, while after Thanksgiving, "This Tree Was Grown," (*Modern Music Primer*); "The First Noel," (*Folk Songs and Other Songs for Children*); "What Child Is This" (*Old English*), "Oh, Little Town of Bethlehem" (*Church Hymnal*) give a Christmas flavor to the work. "The North Wind Doth

Blow," Elliot; "Sleighing Song" and "Tracks in the Snow," by Gaynor, carry on the winter thought. "The Snow Birds' Message," "The Little Trolls," and "The Woodpecker," (*Modern Music Primer*) "Rollicking Robin," by Knowlton, round out the seasonal songs. With this work come patriotic songs like " The Flag Song," by Gaynor, besides the reviewing of the regular national hymn and a large amount of material connected with occupations, like "The Workshop."

Two features in the song work mark a special advance on the second-grade work. There is first, a greater emphasis on the individual rendering of songs with criticisms from the class, and second, a tendency to treat the class more as a chorus, throwing greater responsibility on each pupil, for the effect of the whole. Occasionally the class sings as a chorus before the whole school, the preparation for this giving added zest to the work. The class measures itself with the upper classes that are doing similar work and develops class enthusiasm and pride in good work.

After the song work is well established and the pupils have adjusted themselves to the routine of the school, the second kind of musical activity, intensive work of observation and analysis, mentioned in the second grade, is commenced. At first this work is a review of what was done in the second grade, consisting of acting, picturing, and giving the rhythmic notation of the easier songs and song sentences, then singing from the blackboard, the teacher dictating with a pointer, with a mark placed on whichever line or space is to be considered as doh.

Ability is developed to follow the pointer at different rates of speed with changes in duration given to tones, with repetition of some tones before going on, with changes in direction, with introduction of skips of thirds and fourths as in the tonic chord, and finally in exercises combining all varieties of dictation. Another kind of dictation work, preparatory to learning the complete staff is to call a line or a space doh, singing the sound names down to lah, and back again. Then without changing the pitch of lah, singing me to the tone, and singing up the series me fah soh doh ti lah requires the singing of a half step and a whole step down. Me fah soh requires the singing of a half step and a whole step up. When this is accomplished, instead of making the change first on the upper and then on the lower tone, both series are sung from the same tone. After doh ti lah,

soh fah me is sung and after me fah soh, lah ti doh is sung. This develops the ability to sing either a whole step or a half step above or below any given tone. By the time the natures of the whole and a half step have been thoroughly learned, the pupils have realized that the lines and spaces so far used show only the juxtaposition of the regular tones of the scale without showing the nature of the distance that lies between them, whether a whole or a half step. This is further illustrated by writing song sentences on the blackboard showing how the same line and space may represent in one song the distance of a half step and in another that of a whole step. The story is told of how the early musicians tried to improve the notation of the staff by giving to the lines and spaces names representing different pitches, how they borrowed an idea from the Greeks, who named the different pitches of sound with the letters of the alphabet. The early musician wrote one letter down on the staff to show what its pitch was, it being an easy matter to reckon from the letter written down what the others would be. One of these letters taken to indicate the exact pitch of the lines and spaces of the staff was the letter G and it was placed on the second of a group of five lines. The ornamental drawing of this G finally turned into what we are familiar with as the G clef. By thus fixing the sound of G on the second line of the staff it is found that E and F, between which a half step is always sung, come on the first line and the space above it, and that B and C, between which the other half step is sung, come on the third line and the space above that. The pitch of the upper C is given and the children sing the letter names, until a thorough association is made between the letter and the line or space that represents it on the staff. The pupils try to sing by taking A, for instance, as the first note and discover how difficult it is to have the order of tones come right. They discover that only when they take doh on C can they make the order of the sounds represented by the sound names and that required by the staff when the G clef is placed upon it agree. A little song like "Gently Rocks My Light Canoe" made up entirely on the first and second notes of the scale is sung commencing on the various pitches. The song sounds natural when commenced on F, G, or A but very unnatural when commenced on E or B, where the letter above requires the half step. Pupils discover that this

limitation of pitch is not because of the lack of the proper tone, for they can sing the song anywhere, but because of the inability to represent the tone on the staff when its lines and spaces represent fixed pitch relations. The teacher shows how the soh fah me represented by the letters G F E may be changed to doh ti lah by placing the sharp sign on the space that represents the letter F, making it express a tone half a step higher. The pupils now practice singing doh ti lah and soh fah me down from the letter G, using F sharp to represent ti and the staff position of F to represent fah. In other words the exercise learned first with the sound names without reference to accurate representation is now practised and associated with its pitch representation, so that not only a whole or a half step up from E or down from G can be sung but the nature of the step clearly associated with the sign that represents it. The same thing is done to the half step between B and C. The ability to call C soh and to sing a whole step down produces a tone not represented by the line B, this being half a step too high. The necessity for a new sign is discovered, one that shall do just the opposite work of the sharp, making it possible for a line or space to represent a tone half a step lower than the pitch it represents. This sign is called a flat and the pitches C B A and C B flat A are practised from above and below, using first the already familiar doh ti lah and soh fah me sound names and then the fixed pitch names of the letters. The pupils now discover that with F sharp and B flat they can write their songs in three different places on the staff. The song sentences and the little original songs made are written in these three different pitches and it is found that for the sake of convenience instead of writing the sharp or flat before the tone whenever it is required it can be placed at the beginning of the music, and that when it is so done it is called the key signature and means that doh may be sung on G when F sharp is used and on F when B flat is used.

In the rhythmic work two duration values are studied resembling each other in that both consist of a long note followed by a short note, the difference being that in one the two notes are completed in one pulse, while in the other, two pulses are required to complete the two tones. These durations are first observed then the songs are acted and pictured and when the difference between these durations is thoroughly learned,

whether they occupy one or two pulses, the notation is given, by placing a dot after an eighth note for one and after a quarter for the other.

Creative work or song making described in the article on the second grade is more effectively accomplished in this grade. The pupils after a little practice in making songs in the class find no difficulty in composing them by themselves, their notation being worked out in the class. Before such work is commenced the class discusses with the teacher good subjects for songs giving reasons why some are better than others. Subjects that express some motion or activity, or that present a mood or definite state of feeling like pleasure or regret lend themselves more readily to musical settings than do prosaic statements. For instance, in subjects having to do with wind or water, with occupations like those of the blacksmith or of the milkmaid, or with plays like swinging, see-saw, jumping rope, which express motion and activity, we use the rhythmic materials of music in setting the words to music, while for the expression of states of feeling like regret, longing, cold, weariness, or their opposites, we use the color quality of the tones, such as the bright group of the major chord and the dark of the minor. Nothing however is said about major and minor, the pupils simply follow their feelings as to what the tones say. Effective use of such material in songs already familiar is pointed out. The pupils discover how essential it is to make the music say the same things that the words do, and though they do not succeed in making a complete combination they do become sensitive to each others work, and make excellent critics.

This finishes the description of the three kinds of musical work carried on, showing its relationship to that of the previous grade. The question will be asked, what is the difference in the manner of the work?

In the imitative song work greater independence on the part of the pupil is developed, a better feeling for united effort as a class is encouraged, a keener appreciation of the means used to make songs tonally effective is aroused, and there is awakened a feeling for the song not as something foreign to the school work, forced into it for recreative or amusement purposes, but as something with which to express the poetry of school life

so closely associated with its work, that one easily suggests the other.

Under the second phase of musical activity almost the entire work is limited to such a presentation of the staff, that its intricacies arise naturally from what it attempts to represent, rather than because of the dictum of a teacher. Clef sign and key signature grow out of necessities discovered by the pupil instead of being offered as arbitrary signs for him to memorize.

In the third kind of work the song appreciation of the imitative work and the analysis and notation knowledge developed in the staff presentation are put to a practical test in the vital imaginative activity required in song making, differing from the second grade work in that there is a clearer realization of the means used for the end obtained.

H. L.

TIME SCHEDULE

Grade II.

Number of minutes per week devoted to the various activities.

Reading and Literature	260
(The class is divided into two groups.)	
Language	60
Spelling	50
Penmanship	60
Arithmetic	130
Manual Training	105
Primitive Life. No definite assignment.	
Art	70
Nature Study	70
Physical Education	100
Music	60
Recess	75
Opening Exercises	75

Grade III

Number of minutes per week devoted to the various activities.

Reading and Literature	15
Language	90
Spelling	50
Penmanship	75
Arithmetic	150
Manual Training	70
Home History, Home Geography, Nature Study	160
Art	70
Physical Education	80
Music	60
Recess	75
Opening Exercises	75

II. GRADE. CHART SHOWING RELATION

PRIMITIVE LIFE.	MANUAL TRAINING.	LITERATURE.	READING.	NATURE STUDY.
Pastoral Stage: I. DOMESTICATION OF ANIMALS.		Bible stories: Joseph, David, Abraham, Ps. xx. iii. The Cow (Stevenson). Clouds (Sherman).	Llolami. Children of the Cliff. Lodrix (Wiley and Edrick).	Study of sheep, goat, and cow.
II. FOOD: a. Animal: products of chase, flocks, herds. b. Vegetable: wild rice, fruits, berries. c. Means of securing: hunting herding. d. Preparation.	Make wooden dashers. Make butter and cheese. Cook rice and fruits. Make slings, shepherd's staff, corrals, traps, clubs.	Stories of shepherd life in Arabia, Turkey, and Persia.	In Field and Pasture (Dutton).	
III. SHELTER: a. Location, dependent upon food and water supply. b. Kind: temporary tents, huts.	Make Asiatic tent of coarse material, rugs, poles for tent, shelters for animals, huts, wells.			
IV. CLOTHING: a. Skins, leather, wool (camel and goat's hair). b Manufactured: dyeing, spinning, weaving.	Make sandals of skins or raffia. Cut wool from fleece, wash, scour, card, dye, spin and weave. Make carders. Construct loom, string. Make shuttle, heddle, beater, and warp stick.			
V. EFFECT UPON MAN: a. Nomadic life. b. Development of sustained effort. c. Humanizing influence. 1. Sympathetic relations with animals. 2. Veneration aroused by patriarchal government. d. Development of songs and dances. 1. Religious. 2. Occupational. e. Development of games in connection with pastoral life: 1. Vaulting. 2. Leaping. 3. Climbing. 4. Throwing of sling. 5. Walking on stilts. 6. Games of hare and hound. 7. hunt the gray wolf. f Story-telling, tales, traditions and adventures.	Dress figure in shepherd costume. Construct on sand-table scene from pastoral life Make stilts, lyre, flute.			Dairies. Care of milk.
VI. METHOD OF WARFARE: spears, shields, slings, bows and arrows.	Make shields, spears, clubs.			
VII. MODES OF TRAVEL: camel, caravan, horses, mules.	Saddle bags. Dress figure in Arab costume.			
VIII. GOVERNMENT: patriarchal.				

OF OTHER SUBJECTS TO PRIMITIVE LIFE

ART.	ARITHMETIC.	MUSIC.	PHYSICAL EDUCATION.
Study of pictures. The Shepherdess (Le Rolle). Sheep (Anton Mauve). Lost Sheep (Schenck). Navajo, Sheep Herder, Trailing Texas Cattle (Remington). The Knitting Shepherdess.	Measurements and problems in connection with constructive work.	The Shearers. The Cow. Milkmaid. Making of original songs.	
Imaginative work. Illustrating life studies.			
Model— animals and pottery.			
Designs for rugs and pottery decoration. Free hand cutting.			

II. GRADE. CHART SHOWING RELATION

PRIMITIVE LIFE.	MANUAL TRAINING.	LITERATURE.	READING.	NATURE STUDY.
Agricutural Stage:				Study of grains and vegetables as food.
I. FOOD: a. Animal. b. Vegetable. c. Conditions for securing: 1. Water supply. 2. Pasturage. 3. Climate. 4. Soil.	Corn shelled, parched, ground, sifted, bolted. Idea of mealing stones. Cook corn meal. Corn cakes. Modern forms of corn. Cut, dry, and string apples.			
II. SHELTER. a. Settled habitation. b. Location, fertile valleys, plains. c. Structure: stone, brick, wood.	Construct farmhouse with brick walls and thatched roofs, barn and sheds, fences of stones and branches. Mould and dip candles.			
III. CLOTHING: wool, flax, cotton.	Compare wool fibre with cotton and flax. Spin flax. Make farmer's hat using corn husks or raffia.			Study of flax and cotton as compared with wool.
IV. EFFECT ON MAN: Moral { Peaceful life, social rights, and laws. Material { Foresight developed. Concentrated effort. Scientific knowledge.		The Hay Loft (Stevenson) Evening at the Farm (Trowbridge). The Emperor's New Clothes (Andersen). The Farmer and his Sons (Æsop). In the Meadow (Sherman) Spinning Wheel Song (Waller). Robinson Crusoe.		
V. INVENTION OF TOOLS.	Make primitive plow, rake sledge, hayrick, yoke for oxen, whips, ladders.			
VI. DOMESTICATED ANIMALS AS BEASTS OF BURDEN.				
VII. TRANSPORTATION: carts, litters, baskets, horses, oxen.	Cart with wheels, litter, market baskets, panniers.			
VIII. GOVERNMENT AND COMMUNITY LIFE: More settled laws. Individual ownership of property.				
IX. FESTIVALS: Religious, secular. Origin of games connected with labor.				

OF OTHER SUBJECTS TO PRIMITIVE LIFE

ART.	ARITHMETIC.	MUSIC.	PHYSICAL EDUCATION.
Study of photographs: Hoeing Corn. Feeding Poultry. Making Hay into Hay Cocks. Loading Hay. Milking Time. Representation of vegetables by means of water color, ink, crayon, clay, scissors.		Jolly is the Miller. Feeding the Chickens (Knowlton). Mr. Duck and Mr. Turkey. Blow, Wind, Blow. Sing a Song of Harvest (Primary and Junior songs). Swedish weaving game. Swedish linen weaving game. Oats, Peas, Beans, and Barley (Swedish).	Dramatization of stories, poems, and songs. *Games.* Hare and Hounds. Hunt the Gray Wolf. Mulberry Bush.

II. GRADE. CHART SHOWING RELATION

PRIMITIVE LIFE.	MANUAL TRAINING.	LITERATURE.	READING.	NATURE STUDY.
	Mounting fall flowers. Making seed envelopes and boxes. Making leaf books.	Story of the Flax (Andersen). Nature Myths Dog of Flanders (Ouida). A Friend of Justice (H. Van Dyke). Drop of Water (Andersen). The Fir Tree (Andersen). Hemlock Tree, 1st verse (Longfellow). Poems and stories memorized and read and used in oral reproduction.		Recognition of fall flowers. Dissemination of seeds. Insect life: grasshopper, cricket, beetles, katydid, locust. Study of trees: chestnut, horse chestnut, sweet gum, pine, balsam, hemlock, spruce, cedar. Observation of branches, leaves, buds, blossoms, fruits, and effect of seasonal changes.
	Making weather charts. Making sun-dial. Making shadow stick. Making kites.	Clouds (Sherman). Before the Rain (Aldrich). Cloud, 1st verse (Shelley). Wind (Stevenson). Night Wind (Field). Four Winds (Sherman). Summer Shower (Dickinson). A Day (Dickinson). Brook in Winter (Lowell). Snowflakes (M. M. Dodge). Snowflakes, 1st verse (Longfellow). Wizard Frost (Sherman).		Weather conditions. Wind, direction and effect. Forms of water: clouds, rain, snow, frost, fog. Points of compass. Seasonal changes: effect upon man, animal life, and plant life. Animal life: Observation of cocoons collected by children. Sheep, goat, cow, dog, horse, turkey, wild duck.
	Making labels. Making trellises.	March (C. Thaxter). March (M. M. Dodge). The Months (Sherman). The Daffodil (Thaxter). Golden Glories (Christina Rossetti). In the Garden (Dickinson). Frogs at School (G. Cooper). Verses on Birds (E. Arnold). Good Morrow, Little Rose Bush (J. Stacy). Dandelion (J. Tabb). Sir Robin (Larcom). Apple Orchard. Spring, 1st verse (Wm. Martin).		Plant life: planting seeds, observations of growth lettuce, radish, beans, corn, and other common vegetables. Germination: Rec. of spring flowers wild and cultivated, bulbs, planting and observation of growth. Recognition of birds seen on campus and in park —robin, starling, purple grackle.
	Holiday Gifts: blotters, calendars, napkin rings, picture frames, bookmarks, candy boxes. Shoe bags, decorated with initials. Valentines.	Santa Claus and the Mouse. Night before Christmas. Gingham Dog and Calico Cat.	Stepping Stones to Literature. Graded Classics II. and III. Fairy Tales and Fables (Baldwin). Stories of old Greece, Firth. Child Life, III. Letters from a Cat.	

OF OTHER SUBJECTS TO NATURE STUDY

ART.	ARITHMETIC.	MUSIC.	PHYSICAL EDUCATION.
Decoration, using original designs on leaf books. Decorate seed boxes and envelopes.	Measurements in constructive work.	The Falling Leaves (Neidlinger). Leaves Party (Gaynor).	
Outdoor sketching. Memory sketches. Painting buds, twigs, leaves, and trees. Memory sketches of evergreens on campus. Decoration of kites.		August Katydid Song (Knowlton). The Wind (Stevenson). Kite Time (Knowlton). My Shadow (Gaynor).	
Design and decorate calendars. Painting flowers, fruit, and vegetables raised in window-boxes and greenhouse and garden, using water-color and crayon as mediums.		Jacky Frost (Eleanor Smith Primer).	
	Problems in time relating to growth of plant from seed.	What Robin Told (Knowlton). Little Yellow Dandelion (Gaynor). Clovers (Knowlton).	
Painting spring and fall wild flowers. Paint robin. Paint bluebird. Model leaves nuts, flowers, and vegetables in clay.	Problems in constructive work and laying out of individual flower-beds	What Robin Sings (Eleanor Smith Primer.)	
Picture study— Can't you talk?			
Madonna le Gran Duca.	Counting by 1's, 2's, 3's 4's, 5's, and 10's. From 1–30 by other numbers. Place values of units, tens, hundreds, numbers written to 1,000.	Merry Christmas (Gaynor). December. January (Knowlton). Snow Flakes (Gaynor).	
Easter Cards.	Dollar, half-dollar, quarter, second, minute, hour, day, week, month.		
Decoration of valentines.	Reading time by the clock. Addition tables through 9's. Subtraction—Inverse cases of addition. Fractions, $\frac{1}{2}$, $\frac{1}{4}$, $\frac{1}{3}$. Multiplication—2, 3, 4, 5 tables. Signs +, ×, −, =. Problems.	The Postman (Knowlton).	

ALUMNI DEPARTMENT

Committee of the Alumni on Publication

Ernest N. Henderson (T. C., 1901–03), Adelphi College, Brooklyn, chairman.

Miss Ellen Yale Stevens (T. C., 1891–93), Brooklyn Heights Seminary, 18 Pierrepont St., Brooklyn.

Mrs. Emily Brinckerhoff Brown (T. C., 1899–1901), Bretton Hall, Broadway and 86th St., New York City.

Mr. D. E. Cloyd (T. C., 1901–05), Principal, High School, Spokane, Washington.

Miss Ruth E. Dowling (T. C., 1895–1903), New York Training School for Teachers, New York City.

Attendance at Teachers College during 1905-06.—The number of resident students in the college is greater than it has been in any previous year—976 in all. The extension students doing work at Teachers College number 1201; the school pupils, 1182, making a grand total of 3359 receiving instruction under the auspices of the College. To this number might be added 1631 students enrolled in extension classes given away from the College, and 12,111 auditors in our extension lecture courses. The increase in enrollment is apparent in all classes of students, except the special students and auditors, and is greatest with the professional and graduate students, being 104 in the former case, and 49 in the latter. The number of college graduates who have enrolled during the year has increased only slightly, but there is a marked increase in the students who have had a partial college course. We append in tabular form the chief data concerning the year's enrollment. Of the 114 colleges and universities there shown to be represented in our student body, the College of the City of New York sent the largest number, 19. Next in order came Smith, 13; Vassar, 10; University of Chicago and Harvard, each, 9; Wellesley, 8; Stanford, 6; New York Normal College, 5; Massachusetts Institute of Technology, 4. Eleven others, Georgia Normal School, Indiana, Lebanon, Mt. Holyoke, New York, Northwestern, California, Wisconsin,

Wesleyan, Williams, and Toronto, sent 3 each. Eighteen others sent 2 each, and the remainder of the 114, 1 each.

The year has been exceptionally satisfactory. We have never had better students, and with one exception our corps of instructors has been complete. There has been no serious illness among either students or faculty. In fact the conditions for good work have never been so satisfying in any year of our history.

976 Resident Students 1905–06.

Previous Training	Territory and Schools Repres.	College Enrollment	Candidates for Degrees
College Graduates 260	States 38	Graduate Students 137	Ph.D. 68 (43 Education major)
Normal Graduates 245	Foreign Countries 12	Professional Students 604	A.M. 147 (94 Education major)
	Colleges, Universities and Professional Schools 114	Collegiate Students 89	Bachelor Diploma and B.S. 357
Partial College Course 274	Normal and Training Schools 87	Special Students 35	Special Diploma 117
	Technical Schools 67	University Degree only 111	A.B. (51 Columbia) 164 (113 Barnard)

The College Graduate and Primary Education and Domestic Science.—Dean Russell in his recent report discusses Kindergarten and Primary Education work, and Domestic Art and Science work in its relation to the college graduate. He attributes the reluctance of women who are college graduates to enter these fields as due in part to ignorance of what these departments have to offer. The notion is abroad that positions in these fields are already pre-empted by graduates of normal schools, and that the salaries paid are less remunerative than in

secondary schools. It is true that the best places are now held by normal school graduates and that the average salary is small, —smaller than in the secondary schools—but college graduates could easily outstrip all competitors if they would only fit themselves for the work. These places are the only ones in the entire field reserved exclusively to women, and only in these places does the woman have an equal chance with the man. Salaries rise in proportion with the ability of teachers to lead in educational work. And in no place of educational work is there greater need for leadership than in these subjects. Of course the intending leader must make herself competent both from the academic and the professional standpoint. Perhaps the prime requisite is moral earnestness and a wholesome personality. But where else is one more likely to find these native gifts than among our college women? College women are, therefore, the logical candidates for those positions which are beginning to open in the public school systems and in the colleges and universities, particularly in the South and West. It is obvious, however, that the women's colleges of the East do not recognize the advantages they possess. They give little heed either to the arts or sciences underlying home-making, or to the professional opportunities open to their graduates in other than secondary schools. and yet I know no college that does not actively interest itself in securing positions for those of its graduates who must be self-supporting.

The number of college women entering Kindergarten, Primary Teaching, and Domestic Science in Teachers College is increasing. In the former two we have had during the past year a large enrollment of advanced students, nearly as many as in all previous years together, and the prospects are good for further advance in scholarship and professional ability. While the public demand for better trained teachers is fundamentally responsible for this advance, the immediate cause of our securing better students is the offering to them of better opportunities. So long as we provided in these departments one set of courses for both elementary and advanced students we secured only the elementary students; as soon as advanced courses were opened up and restricted to qualified students better students immediately applied for admission.

Domestic Science.—As yet few institutions give any instruc-

tion in this field, and the number of students therefore qualified to do advanced work is not large. The changes contemplated in the near future look to the strengthening and differentiation of the courses now offered. In Domestic Science the prime requisite is a better scientific foundation. This we have sought to secure in courses in physiology and bacteriology to be given by the department of biology, in the chemistry of foods, and household processes, which are designed to follow the courses in general chemistry required for admission, and in the scientific and practical study of food principles and materials as related to dietaries. In each of these fields we shall offer, this year, courses much stronger than those previously given.

Domestic Art.—The most important change in this department is the appointment of Mr. Le Monte Warner, who has had much practical experience as designer of furniture and house decorations, to give courses in household art and design. His work, supplementary to that offered by our Department of Fine Arts. will seek to apply the principles of design to textiles, wall-coverings, furniture, millinery, and costumes. The aim is to give students criteria of values in the materials that may be purchased for clothing and for use and ornamentation in the home.

Foreign Appointments.—The College has just received word of the appointment of two of its former students to important educational positions in China and Japan. Samuel Sung Young, who received the degree of Master of Arts in 1905, is in charge of the College of Foreign Languages, Canton, China. Goruku Ikida, of the class of 1903, as a member of the Board of Education for Formosa, has just completed a translation into Japanese of Prof. S. T. Dutton's volume on *School Management*.

Winthrop College Scholarship.—The College has this year had the unique experience of receiving a scholarship founded by the Alumni of another college. The Alumni of Winthrop College, at their annual meeting at Rock Hill, gave a scholarship in Teachers College for the benefit of some Alumnus of Winthrop. This was done in recognition of the work Teachers College is doing for students in normal and industrial education.

Loan Fund.—The class of 1906, as its graduation gift to the College established a Loan Fund which is to be available at a small rate of interest for future students who desire to supplement their resources.

Appointments.—The Appointment Committee reports the present location of 373 students for the coming year; 41 of these are in colleges and universities, 3 are school superintendents, 20 are in normal schools, 114 are supervisors and special teachers, 152 are in secondary schools, 70 in elementary schools, 24 in kindergartens, and 13 in hospital administration. Some of these appointments which may be of interest to our readers we give below.

Two New York schools have this year selected a number of their corps of instructors from Teachers College. At the Ethical Culture School Miss Helen P. Bennett will be in charge of the elementary department, Miss Mabel T. Burnham the eighth grade, and Miss Ethel C. Bratton, B. S., the sixth grade. Miss Mary Flexner, A. M., will instruct in history, Miss Lillie M. Lawrence, B. S., in Latin, and Miss Alice M. Paine will have the primary class. At the New York Training School for Teachers, Miss Anita Earl returns to take charge of the domestic art department, Mr. Percy Davidson, A. M., will assist in education, Mr. Irwin W. Driehaus, A. M., in science, Miss Mary C. Chedsey, B.S., in biology, and Mr. Francis M. Hamilton, A. M., in psychology. Miss Louise Fisher, B. S., who was previously in the Speyer School, has resigned her work there for physical education work in the same school.

Miss Helen Gordon will take charge of the Kindergarten Training Department, Normal School, Washington, D. C. Miss Gordon succeeds Miss Fulmer, who comes to Teachers College as instructor.

Miss Mary Ketchum returns to Syracuse to resume her work in design.

Miss Mary E. Rich secured an appointment at her home, Oshkosh, Wis., as primary critic in the State Normal School.

Mrs. Frances H. Consalus resigns her work at Long Branch to take Manual Training in Public Schools, New York City.

Miss Theda Gildemeister, B. S., returns to the State Normal School, Winona, Minn., to take up her work in Methods.

Mr. Luther A. Hatch, who has been on a year's leave of absence, returns to State Normal School, De Kalb, Ill., as Principal of the Training School.

Miss Ethel Craighead, A. M., resigns at Hampton Institute

to take up work in history at the Friends' Select School, Washington, D. C.

Dr. Edwin C. Broome, for some time Superintendent of Schools in Rahway, N. J., has been appointed Principal of the Elementary Department, Adelphi College, Brooklyn.

Mr. Louis Deyo, B. S., succeeds Mr. William M. Andrew as Principal of Public Schools, Bronxville. Mr. Andrew has accepted a similar appointment in Rochester, N. Y.

Mr. Morris A. Briscoe (A.M.), Columbia, History, College of the City of New York.

Mr. Marvin V. Bennett (A.M.), Professor of Latin, Yankton College, Yankton, S. Dak.

Miss Carrie W. Blair (A.M.), History at College for Women, Raleigh, N. C.

Mr. Earl G. Bradsher (A.M.), Assistant in English, University of Missouri.

Mr. Frederick G. Bonser, (M.S.), Head of the Department of Eucation, State Normal School, Macomb, Ill.

Miss I. F. Cowles, Domestic Science work, Kansas State Agricultural College, Manhattan, Kansas.

Miss Mary C. Cunningham, (A.M.) Instructor in History, Albert Lea College, Albert Lea, Minn.

Mr. John A. Davis, Director of Physical Education, University of Cincinnati.

Mr. Joseph L. Henderson (A.M.), Professor of Education, University of Texas, Austin, Texas.

Mr. William E. Kirk (A.M.), Professor of Latin and Greek, Williamette University, Salem, Oregon.

Mr. Irving H. Loder (A.B.), Instructor in Chemistry and Physics, Reed Christian College, Lucknow, India.

Miss Maude E. McClary (A.M), Assistant in Latin, Wellesley College.

Miss A. Barnette Miller (A.M.), Instructor in English, Vassar College.

Miss Venita Pendleton (B.S.), English, Bryn Athyn College, Bryn Athyn, Pa.

Miss Olive C. Ross (A.M.), English, Ward College, Nashville, Tenn.

Miss Ida S. Robinson, Drawing and Manual Training, Colegio Sara L. Keen, Mexico City.

Mr. Lewis P. Siceloff (A.M.), Assistant in Mathematics, Columbia College.

Mr. Charles Savage, Assistant Director of Physical Education, Oberlin College, Oberlin.

Miss Ida C. Thallon (A.M.), Instructor in Latin, Vassar College.

Miss Leila G. Tuttle (B.S.), English, Davenport College, Lenoir, N. C.

Miss Louise Waugh (B.S.), Domestic Science, Michigan Agricultural College, Agricultural College, Michigan.

Miss Luela Eakins (A.M.), Greek, Greenville College, Greenville, Ill.

Mr. Charles B. Dyke (A.M.), Assistant Superintendent of Schools, Boulder, Col.

Miss Frances Jenkins, Methods and Education, Training School for Teachers, Baltimore.

Miss Jean Kennedy, Domestic Science, Macdonald Agricultural and Teachers College, St. Anne de Belleville, Montreal.

Miss Rosemina Greist, Domestic Science, Macdonald Institute, Guelph, Ontario.

Miss Ethelwyn Miller, Art, Horace Mann School.

Mr. Guy C. Stockton (A.B.), Principal of High School, Victor, Col.

Mr. James L. Stockton (A.B.), Principal of Elementary School, Passaic, N. J.

Miss Mary D. Swartz (B.S.), Assistant in Domestic Science, Teachers College.

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CONTENTS

PAGE

THE PLACE OF GRAMMAR IN THE ELEMENTARY CURRICULUM ..... *Franklin S. Hoyt* 1

HISTORICAL ENGLISH GRAMMAR IN THE HIGH SCHOOL ..... *Marion S. Coan* 35